How to Navigate the Technical Sessions

There are four primary resources to help you understand and navigate the Technical Sessions:

- This Conference Session listing, which provides the most detailed information. The listing is presented chronologically by day/time, showing each session and the papers/abstracts/authors within each session.
- The Author and Session indices provide cross-reference assistance (pages 91-97).
- The "Master Track Schedule" is on the back cover. This is an overview of the tracks (general topic areas) and where/when they are scheduled.

Quickest Way to Find Your Own Session

Use the Author Index (page 91) — the session code for your presentation will be shown along with the room location. You can also refer to the full session listing for the room location of your session.

The Session Codes

TA01

Room number. Room locations are also indicated in the listing for each session.

Time Block. Matches the time blocks shown in the Program Schedule.

The day of the week

Time Blocks

Thursday

A — 8:30am - 10:00am
B — 10:30am - 12:00pm
C — 1:30pm - 3:00pm
D — 3:30pm - 5:00pm

Friday

A — 8:30am - 10:00am
B — 10:30am - 12:00pm
C — 1:30pm - 3:00pm
D — 3:30pm - 5:00pm

Saturday

A — 8:30am - 10:00am
B — 10:30pm - 12:00pm
C — 1:00pm - 2:30pm

Thursday, 8:30am - 10:00am

■ TA01

Room E130 (Aud.)

Decision-Making Under Uncertainty

Contributed Session

Chair: Song Yao, Assistant Professor, Northwestern University, 2001 Sheridan Road, Marketing Dept, Evanston, IL, 60208, United States of America, s-yao@kellogg.northwestern.edu

1 - Overdraft and Consumer Inattention – An Application of Dynamic Structural Model on Big Data

Kannan Srinivasan, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA, United States of America, kannans@andrew.cmu.edu, Xiao Liu

In 2012, consumers paid 32 billion overdraft fees despite regulations designed to protect them from these charges. We explain this behavior with a dynamic structural model of consumer inattention, i.e. consumers are inattentive to their balances in the checking account. We find that the perception error caused by inattention can lead consumers into mistakenly overdraft. And if a consumer is aware of her inattentiveness, she'll restrain her spending to a suboptimal level to prevent overdraft. Therefore, sending alerts to notify consumers about their balances can solve both problems and increase the welfare for both the consumers and the bank. We apply the model to a big data of more than 500,000 accounts for a span of seven years. To alleviate the computational burden of solving dynamic programming problems on such a large scale, we combine parallel computing techniques with a Bayesian Markov chain Monte Carlo algorithm. The big data equip us with a refined measure of consumer heterogeneity. As a result, our counterfactual simulation yields an optimal strategy to send targeted alerts to the right consumer at the right time.

2 - Search for Information on Multiple Products

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We develop a framework for continuous search for information on a choice set of multiple alternatives, and apply it to consumer search in a product market. When a consumer considers purchasing a product in a product category, the consumer can gather information sequentially on several products. At each moment the consumer can choose which product to gather more information on, and whether to stop gathering information and purchase one of the products, or decide not to purchase any of the available products. Given costly information gathering, consumers end up not gathering complete information on all the products, and need to make decisions under imperfect information. We solve for the optimal search, switch, and purchase or exit behavior in such a setting, which is characterized by an optimal consideration set and purchase thresholds. The paper shows that products are only searched if they have a sufficiently high expected valuation, and that, given that there are multiple products in the consumer's consideration set, the consumer only stops searching for information and purchases a product if the expected valuation of the product is sufficiently greater than the expected valuations of alternative products. Comparative statics show that negative information correlation among products widens the purchase threshold, and so does an increase in the size of the choice set. We also show that a higher expected valuation of one product might lead to lower sales of all products combined, and that it may be optimal for sellers of multiple products to obfuscate information for high-valuation products, while facilitate consumer search for low-valuation ones.

3 - Do Consumers Evaluate Movies in Detail?

Mai Kikumori, PhD Student, Keio University, 2-15-45 Mita, Minato-ku, 108834, Japan, 2k0k8m4r3-m@z3.keio.jp, Kanoko Go, Yutaka Hamaoka

In marketing, consumer decision-making models based on consumer demand theory (Lancaster 1971) and the multi-attribute attitude model (Fishbein 1963) are popular. These models assume that consumers dissect products into their attributes, assess their importance, and then integrate this into the overall product evaluation. However, if the product was a complex or new product, or if consumers lacked sufficient knowledge and/or ability to process product information, these assumptions may not hold. To model consumer decision-making in such situations, Gilboa and Schmeidler (1995, 2001) proposed case-based decision theory (CBDT) – a decision rule that indicates the best act based on its past performance in similar circumstances. Few studies have applied the CBDT model to marketing research. This study examines the validity of the CBDT model to describe consumer decision-making regarding movie viewing. A questionnaire survey was conducted for student subjects (n=59). The movies they viewed last year, their satisfaction from those movies, and the similarities between them and four new movies are measured. For new movies, viewing intention and the evaluation of the movies' attributes are measured. For new movies whose posters provide detailed information, the multi-attribute attitude model fits better. In contrast, for new movies about which only vague information is provided, CBDT fits better. These results confirmed that the CBDT model can be applied to model consumer decision-making, especially for ambiguous products.

4 - The Value of Sampling

Yuxin Chen, Professor of Marketing, New York University-Shanghai, Leonard N. Stern School of Business, 855 Changning Rd., Shanghai, China, yc18@nyu.edu, Wenbo Wang, Song Yao

This paper investigates the consumer welfare implication of commercial breaks during television programing. Consumers normally prefer watching television without the interruptions of commercial breaks. However, we argue that commercial breaks may sometimes improve consumers' welfare. In particular, when there is uncertainty in television programing such that a consumer is uncertain about the exact utility levels of different channels, she has to engage in costly search to resolve the uncertainty before choosing a channel to watch. The commercial breaks create opportunities for the consumer to sample alternative channels without (further) interrupting the viewing experience on her current channel. Starting in 2012, Chinese government banned all in-show commercial breaks for drama serials. Using data from this natural experiment in Chinese TV market, we estimate a sequential search model to evaluate our conjecture. Especially, this new policy of banning commercial breaks creates exogenous variations in the data that allow us to separately identify consumer preference from search cost. Based on the analyses, we have found evidence that consumers have been worse off due to the ban on commercials because they can no longer sample alternative channels that may have higher utility levels than their current choices.

■ TA02

Room E208

Social Media, Influence, and Virality

Contributed Session

Chair: Swagato Chatterjee, Indian Institute of Management Bangalore, Bannerghatta Road, Bangalore, 560076, India, swagato.chatterjee10@iimb.ernet.in

1 - Modeling Virality of YouTube Video Ads

Yanwei Zhang, University of Southern California, 3660 Trousdale Parkway, ACC 306E, Los Angeles, CA, United States of America, yanweizh@usc.edu, Gerard Tellis

We scrape the YouTube website to collect data on views, share, and likes of YouTube ad videos by hour. We also collect media citations of the same videos in print and TV media from Lexis-Nexis and Factiva by day. We use these data to understand the virality of YouTube videos. For initial modeling, we propose to develop and test a Dual-Bass model, wherein diffusion of shares in the prior period prompts diffusion of views while diffusion of views itself prompts diffusion of shares. Preliminary results suggest that 1) only a minority of videos go viral; 2) most viral videos reach a peak in the first day; 3) thus hourly data are critical to understand dynamics; 4) the diffusion curve of video views and shares are highly skewed, with a rapid wearin and slow wearout; 5) the curve for shares peak and declines before that for views; 6) In general we expect the dual-Bass model to fit moderately well, with high p's and low q's relative to consumer durables. Ongoing research focuses on the inclusion of exogenous variables such as video content and media cites as also the use alternate dynamic models.

2 - The Facebook Genome Project: What Drives Engagement With Branded Social Media Content On Facebook?

Andrew Stephen, Assistant Professor, University of Pittsburgh, 318 Mervis Hall, Pittsburgh, PA, 15260, United States of America, astephen@katz.pitt.edu, Jeff Inman, Michael Sciandra

Over recent years brands have increasingly used social media platforms such as Facebook for marketing communications. At the center of most brands' social media strategies is content, which they disseminate to their "fans" and "followers" in the hope that it generates engagement such as "likes" and sharing or word of mouth. This research examines a large set of Facebook posts from several large brands across various industries (e.g., restaurants, financial services, sports, retail) and empirically identifies those characteristics of brands' posts that are most effective in boosting fan engagement. Our findings are used to prescribe ways brands can optimize their social media content by designing posts that contain specific combinations of engagement-boosting attributes.

3 - Sharing Photographs in Social Networks – Privacy Vs. Self-presentation Motives of Consumers

Ines Daniel, Dr., BTU Cottbus-Senftenberg, Erich-Weinert-Strafle 1, Cottbus, 03046, Germany, ines.daniel@tu-cottbus.de

Social networks are very popular. Facebook alone has more than one billion users around the world. Daily, users upload more than 350 million photographs. The Currently, Instagram users have uploaded more than 16 billion photographs. The reasons why social networks on the internet are popular are numerous. The most common reason is to stay in touch with friends and communicate with them (Ellison et al. 2007, van House 2011)). But are social network users concerned when deciding to disclose personal information and photographs? Barnes (2006) shows that U.S. American students share a lot of information on their profile in social networks, even though they express concerns about the misuse of private information. She called this phenomenon "privacy paradox". In this context, Dinev and Hart (2006) investigated why people reveal personal information on the internet despite relatively high perceived risks. They found that risk-discriminatory factors such as the general confidence in the Internet as well as the individual consumer interests cause people to give up some of their privacy. Furthermore, initial studies show that photographs can be used for the purpose of market segmentation and analyzing people's lifestyles (Daniel and Baier 2013, Baier et al. 2012). Now the question arises which users are more reserved by uploading private information and photographs and which information and photographs are posted on the internet without hesitation. For this purpose, a survey of 280 people was conducted. In the following, we discuss the results of the study.

4 - Look Ahead or Look Back

Swagato Chatterjee, Indian Institute of Management Bangalore, Bannerghatta Road, Bangalore, 560076, India, swagato.chatterjee10@iimb.ernet.in, Srinivasa Prakhya

Social influence is an important facet of consumer decisions models in service queues. Service queues could be perceived as social systems with information content that the consumer could assimilate into her prior knowledge and use in decision making. For instance, the length of the queue could provide a signal of service quality about which the consumer is imperfectly informed. Researchers have studied this phenomenon and considered consequences such as the herding effect where the consumer attaches more importance to the social signal relative to her private signal. In this study, the focus is on the decision of whether to continue to stay in the queue or to leave. This decision is influenced by the information content in the queue which is assumed to have distinct parts. Social validation, illusionary progress, and sunk cost perspectives are used to postulate differential impacts of information contained in distinct parts of the queue. The number of people ahead signals the effort required to avail the service. Indeed, we routinely observe service providers giving information about the number of people ahead and expected waiting time to consumers in queues. The number of people behind could signal social value and reduce dissonance thereby inducing the consumer to stay in the queue. Such backward looking behavior has not been explicitly modeled in extant research. Moreover, the above two information together provides the queue length which can also signal service quality. Hence, the service providers could strategically provide information about the number of people behind to enhance the consumer's waiting experience.

■ TA03

Room E204

Corporate Social Responsibility & Firm Performance

Contributed Session

Chair: Sumitro Banerjee, ESMT, Schlossplatz 1, Berlin, No, 10178, Germany, sumitro.banerjee@esmt.org

1 - How Firms Should Manage their Corporate Social Responsibility Activities

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Given the importance of corporate social responsibility activities in today's business, it is important that firms understand how their choice of CSR activities influence the way they are perceived by stakeholders. In this research, we focus on one stakeholder, the consumer, and test whether consumer reactions to CSR activities are dependent on: 1) whether the activity is related to the company's sales related objectives or not, 2) whether the CSR activities are carried out in a foreign country or not, and 3) the company's time commitment to the activity. To do so, we invited participants to read about a variety of CSR activities that two airlines (Air Canada and Japan Airlines) could engage in. CSR activities were both related to the airline-industry ("Planting Trees for Cleaner Air") and unrelated ("Food for Children"). Each activity could be carried out in three countries (Canada, Japan and Ghana), and varied in terms of the time commitment (1 year and 12 years). For each initiative, participants indicated their support by providing a score from 0 (no support) to 100 (full support). We found that consumers perceived a firm's CSR activities more positively when the initiatives were unrelated to their industry. Consumers also rated CSR activities occurring in Ghana most positively, followed by activities occurring where the firm is located. Finally, consumer ratings were higher for longer, relative to shorter, time commitments. We believe that this research offers both theoretical and practical contributions, and hope that it will spark future research ideas in the area of corporate social responsibility.

2 - CEO Functional Background and Corporate Social Performance: The Role of Marketing

Ranjit Magendraraj, Doctoral Student, Arizona State University, W. P. Carey School of Business, Tempe, AZ, 85287, United States of America, rmagendr@asu.edu, Rajiv Sinha

This paper investigates the impact of the functional backgrounds of CEOs on their firms' Corporate Social Performance (CSP) and its financial consequence – Corporate Financial Performance (CFP). The `Upper Echelons Theory' (Hambrick 2007) posits that CEOs' past experiences vastly distort their information processing and decision analysis to suit their world view owing to bounded rationality. Relatedly, the empirical literature examining the wide variation in pro-social investments has revealed that differences in CEO orientation and political aliations play an important role (Chin et al. 2013). As the function of marketing is naturally inclined to an outward looking stakeholder management based set of activities, we empirically examine if CEOs with a career background in marketing are paired with corporations with superior CSP. Econometric analyses of a panel dataset put together by combining information on the CSP, CFP, and CEO functional backgrounds of S&P 1500 firms between 2004 and 2011 provide initial support for this proposition. Additionally, We find that the impact of marketing experience on CSP is greater when the CEO has greater power in the boardroom and when recent CFP of the firm is higher. Also, in a separate analysis, we find a positive impact of CSP on market-based CFP (market-book ratio and Tobin's q) as opposed to income-based CFP (RoE, RoA), confirming the theoretical perspective that CSP functions as a signal to the investors in the short term.

3 - Paradox of 'Advertising CSR Efforts' of Sinful Firms: Sin Firms are Sin When They are Seen

Hannah Oh, PhD Student, University of California, Irvine, 20343 Spectrum, Irvine, CA, 92618, United States of America, hoh1@uci.edu, Jongwan Bae, Sang-Joon Kim

There are so-called 'sinful firms' by birth such as ones that are operating in controversial industries, i.e., alcohol, tobacco, gambling, etc. Previous literature has shown that sinful firms can also be socially responsible while producing harmful products and their engagement in CSR efforts can lead to increased firm financial performance. We try to answer two research questions: 1) Does the firm try to actively advertise their CSR engagement/performance in order to mask their negative image? 2) Do the sinful firms' advertising efforts pay out in terms of firm valuation? Using firm's CSR performance data from KLD database in conjunction with COMPUSTAT from 1990 to 2010 where 337 firms are involved in sin-perceived industry, we examine the effect of advertising spending of sin firms' CSR efforts on firm value, which is measured as Tobin's q. To address the endogeneity problem, we employ 2SLS model. The empirical results indicate that sinful firms increase their advertising spending when they engage in CSR programs. However, the result shows that the firm valuation decreases after sinful firms advertise their CSR efforts. Thus, it is rather harmful for sinful firms to advertise their CSR efforts. Even that sinful firms can benefit from engaging in socially responsible initiatives, advertising their CSR efforts may backfire.

4 - Product Quality and Corporate Social Responsibility

Sumitro Banerjee, ESMT, Schlossplatz 1, Berlin, No, 10178, Germany, sumitro.banerjee@esmt.org, Luc Wathieu

We analyze how product quality affects investment in corporate social responsibility (CSR) in vertically differentiated markets. We show that in monopoly markets, a firm with high product quality invests less in CSR but more in other areas such as innovation or advertizing that enhances the value of its product as perceived by the consumers. A firm with low product quality on the other hand invests more in CSR than in innovation. Allowing firms to earn goodwill due to CSR from consumers who do not buy the firm's product, we show that consumer welfare is higher under a high quality firm only if the efficiency of the firm's investment in CSR is above a threshold. Otherwise, welfare under a low quality firm is higher. Under competition, the high quality firm charges a lower price but invests the same amount in CSR and innovation as under monopoly while the low quality firm may charge a higher price and invest more (less) on CSR (innovation) when the efficiency of investment in CSR is above a threshold. Finally, we show that a two dimensional asymmetric information about product quality and CSR leads to a downward distortion of price to signal both high quality and high CSR.

■ TA04

Room E201

Mobile Marketing

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Margherita Pagani, Professor, E M Lyon Business School, 23 Avenue Guy de Collongue, Ecully - Cedex, 69134, France, pagani@em-lyon.com

1 - Location-based Advertising: Measuring the Impact of Context on Consumers' Choice Behavior

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We study how location-based services (LBS) influence consumers' choice behavior in the mobile Internet. LBS are able to make use of the users' geolocation by the means of GPS-enabled smartphones. Further, the ubiquitous nature of smartphones increases the importance of additional contextual factors such as time and weather. Using unique GPS data on location-based coupons and consumer choice behavior, we analyze where and when location-based advertising works. We particularly examine the underlying impact of context-specific factors (e.g., geographical surroundings and temporal perspective) on consumers' coupon choice behavior. Our analyses reveal that consumers' choices are affected by their geographical location and its characteristics, as well as that consumers' mobility has an impact on their coupon preferences. We conclude with managerial implications following the discussion of our results and propose a range of research implications for the use of location data in marketing.

2 - Understanding Marketing Spillover of Location-based Services

Zhuping Liu, University of Texas at Austin, 2110 Speedway B6700, Austin, TX, 78712, United States of America, zhuping.liu@phd.mccombs.utexas.edu, Jason Duan, Frenkel ter Hofstede

This paper studies the newly emerged checkin phenomenon in online social networks. We examine the range of spatial correlation among checkins of different venues on Foursquare and empirically test the promotion effect on venues' checkins. Our model, built upon a Poisson process, employs a dummy instrumental variable approach to correct the bias of the possibly endogenous promotion effect. The model can be widely used to study spatio-temporal count data from various social media. We find significant temporal and spatial correlations among neighboring venues' checkins. Our estimation results indicate strong spillover effects: venues' promotions on Foursquare not only significantly increase their own checkins but also benefit their neighbors.

3 - Shopping on the Go: How Mobile Usage Affects Customer Purchase Behaviors

Rebecca Jen-Hui Wang, Northwestern University, 1915 Maple Ave., #807, Evanston, Il, 60201, United States of America, r-wang@kellogg.northwestern.edu, Lakshman Krishnamurthi, Edward Malthouse

Mobile shopping (M-shopping) has become increasingly important in marketing and retailing. Using a unique dataset from an Internet-based firm, we are able to compare customers' behaviors based on whether they use mobile devices, i.e., smartphones, tablets, and/or personal computers (PCs) when composing, modifying or placing orders online. We find that purchase probability and order size, i.e., the size of the order in dollars, increase as customers become accustomed to M-shopping. In addition to the cumulative effect, orders that are made with one or more mobile devices are more likely to lead to shorter times-to-next-order than PC-only orders. However, not all mobile orders are the same. Orders made with two or more device types are larger than those that are made with only a single device, e.g., smartphone-only orders. Orders made with all three device types, i.e., smartphones, tablets and PCs, are the largest. We propose that customers utilize mobile devices because the technology provides ubiquitous convenience, which leads them to incorporate M-shopping into their habitual routines. Managerially, we recommend that firms should not only promote their mobile platforms, but also encourage their customers to engage through multiple devices, including PCs. Firms can increase their customers' spending by leveraging anytime, anywhere access and customer engagement via multiple devices.

4 - Experiential Engagement and Locational Privacy Intrusiveness on the Use of Mobile Location-based Social Applications

Margherita Pagani, Professor, E M Lyon Business School, 23 Avenue Guy de Collongue, Ecully - Cedex, 69134, France, pagani@em-lyon.com

Internet-capable mobile phones have changed the way people communicate, interact and take advantage of the Internet, allowing them to access the Web whenever they want and wherever they are. With the growth of mobile it's more and more important for marketers to participate in this rapidly-evolving channel. In recent years new applications specifically designed for mobile devices, such as location-based social (LBS) applications, have been gaining notoriety. They use the geographical position of a mobile device to provide value added information and services to users. Much like social network sites on the Internet these services may help users to build valuable networks through which to share information and resources. This research examines the moderating influence of locational privacy intrusiveness on the relation between Experiential Engagement (Personal and Social Interactive) and use of location-based social applications. We conceptualize engagement as a second-order construct that is manifested in various first-order "experience" constructs. We theorize that our engagement constructs are causally related to consumer active and passive use of a mobile location based social network and we test (n=379) the moderating role of privacy intrusiveness (which represents a critical ethical issue) on this relation in Europe and US. Findings show that experiential engagement plays an important role influencing active usage when users are more concerned with privacy issues than when they are less concerned with privacy issues.

■ TA05

Room E231

Internet & Interactive Marketing I

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Xi Zhang, Georgia State University, 35 Broad Street, Suite 400, Atlanta, GA, 30303, United States of America, xzhang31@gsu.edu

1 - Capturing Brand Sentiment through Social Media: A Case for Superbowl

Tingting Nian, PhD Student, New York University, 44 W 4th, KMC 8-185, New York, NY, 10012, United States of America, tnian@stern.nyu.edu, Arun Sundararajan

The advent of social media technologies like Twitter, Facebook and YouTube, and user generated content on sites ranging from Amazon.com to Yelp creates important new challenges for firms trying to shape the image of their corporation and their products. This is because now, user sentiment about a firm is no longer influenced primarily by a message that is carefully orchestrated by the company's marketing machine, but also by the opinions of other consumers. In this study, we use Superbowl 2014 as an "event" to investigate the complex interplay between social media and brand equity, using a theoretically-informed "lens" based on brand equity literature combined with natural language processing techniques. We tracked social media conversations across multiple channels (i.e. Twitter, Facebook, Youtube) for all the brands that advertised during the Superbowl 2014, extracted linguistic features as well as lexical knowledge, and based on which we classified these social media conversations into five brand sentiment categories, namely, Sincerity, Excitement, Competence, Sophistication, and Ruggedness. We found distinct patterns of before-and-after brand sentiment distribution changes across these 40 brands.

2 - Effects of Paid, Owned and Earned Touchpoint Experiences on Consumer Purchase, Use and Satisfaction

Jing Li, PhD Candidate, Eindhoven University of Technology, Den Dolech 2 5600 MB, Eindhoven, Netherlands, Jing.Li@tue.nl, Umut Konus, Emma K.Macdonald, Hugh Wilson, Fred Langerak

The proliferation of new technologies increases the variety of touchpoints where consumers interact with firms and brands. These could be firm-initiated touchpoints including mass media and direct channels, or other touchpoints not initiated or used by firms such as online reviews and conversations. The multiplicity of media and channels raise the difficulties to manage all touchpoints that customers encounter during their shopping trips. Previous research investigated the effects of certain touchpoints on customers' attitudes and behaviors, but is limited by focusing on certain media or channels. No study in the literature captures all touchpoints and their effects on customers' behaviors in consumer shopping journey. We apply a new real-time experience tracking method to address these limitations. 467 customers are reported via a structured text message, whenever they encountered their main current brand in each of five categories (supermarkets, soft drinks, banking, healthcare, and mobile telecommunications) over four weeks. The data set covers a broad range of touchpoints, including paid mass media (TV, newspaper, billboard, and online banner), paid interactive channels (email, SMS, and mail), owned media (store display and call center), and earned media (publicity and word-of-mouth). This study investigates (1) the effects of paid, owned and earned touchpoint experiences on customer purchase and use of services over time, (2) the effects of touchpoints and purchase on customer satisfaction, and (3) the interactions between above touchpoints. We use panel probit models together with simultaneous equations under control of pre-satisfaction, customer demographics and psychographics. We offer implications for further research and practice.

3 - How Customers Respond when they Lose or Gain? Effects of Price Surcharges and Savings on Expenditure

Yiyuan Liu, Assistant Professor, Marketing, Otterbein University, 1 South Grove St., Westerville, OH, 43081, United States of America, yliu1@otterbein.edu, Sanjoy Ghose

Digitization allows firms to set product prices with more flexibility and apply a multi-dimensional price strategy (e.g., shipping costs, price discounts and savings). It also allows consumers to learn different components of price offers and make better decisions. Although previous research works have examined the effects of shipping and handling fees (as a form of price partitioning) on consumer's expenditures and shopping patterns, and some studies investigate how price based promotion strategies influence customers' decision, little work has empirically applied price surcharges and discounts jointly from real-business data to investigate purchase decisions or has associated them with gains and loss judgments. To fill this gap, we employ a Gain-and-Loss Utility model incorporating different levels of gains and losses in prices to model online purchase behaviors in a strategic pricing framework. The current study incorporates both positive and negative price differences between product prices (how much customers spend on products) and basket prices (how much customers pay at the end of transaction) simultaneously to capture the effects of the gaps, either price surcharges or price savings. Using a hierarchical piecewise linear model, we find significant asymmetry in the effects of price surcharges and price discounts on purchase quantity as well as on how customers organize their shopping baskets. We find that when customers lose by paying extra surcharges, it will not hurt the purchase but encourage customers to buy more, and select products with more price and category variations. The results provide managerial insights in setting price surcharges and savings.

4 - Modeling Customer Opt-in and Opt-out in a Permission-based Marketing Context

Xi Zhang, Georgia State University, 35 Broad Street, Suite 400, Atlanta, GA, 30303, United States of America, xzhang31@gsu.edu, V. Kumar, Anita Luo

The rise of new media is helping marketers evolve from digital to interactive marketing, which facilitates a two-way communication between marketers and customers. The use of an idea – "Permission Marketing," which asks marketers to seek consent from customers before sending them messages allows firms to interact and engage with customers without intruding on their privacy. Thus, marketers desire to understand what motivates customers to initiate communication to give marketing permission, what triggers the customers to terminate the interactive relationship and how to influence their opt-in and opt-out decisions through marketing activities. However, while research has examined the drivers of customers' opt-in and opt-out decisions, it has investigated neither the timings of two decisions nor the influence of transactional activity on the length of time a customer stays with a permission-based email program. In this study, the authors adopt a multivariate copula model using a pair-copula construction method to jointly model opt-in time (from a customer's first purchase to opt-in), opt-out time (from customer opt-in to opt-out) and average transaction amount. Through such multivariate dependences, this model significantly improves the predictive performance of the opt-out time in comparison with several benchmark models. The study offers several important findings (1) marketing intensity affects opt-in and opt-out times (2) customers with certain characteristics are more or less likely to opt-in or opt-out (3) firms can extend customer opt-out time and increase customer spending level by strategically allocating resources.

■ TA06

Room E234

User-Generated Content I

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Arvind Rangaswamy, Pennsylvania State University, The Smeal College of Business, University Park, PA, 16802, United States of America, arvindr@psu.edu

1 - Does Offline Brand Advertising Affect Online Chatter? - Dynamic Difference in Difference Analysis

Seshadri Tirunillai, University of Houston, 334 Melcher Hall, Houston, TX, 77204, United States of America, seshadri@bauer.uh.edu, Gerard Tellis

Online chatter (User Generated Content) is an important diagnostic of consumer response because it is spontaneous, live, available at the daily level, and affects consumer sales and firm stock prices. This study analyzes the impact of offline television advertising on online chatter using the setting of a brand advertising campaign of a large computer manufacturer. We first derive multiple metrics of UGC based on volume, valence, ratings, polarity, and virality. Then we assess the impact of advertising on these metrics during the brand advertising campaign. We exploit a natural experiment, formed by observing advertising and chatter before, during, and after a corporate advertising campaign of one firm, while competitors did not have such a campaign. To assess the impact, we construct a synthetic control firm from firms in the market that did not advertise. We then employ the Vector Auto Regression model Method to assess the dynamics of advertisement on the various metrics UGC. Results indicate that the chatter of the target firm increases by about 27% relative to a control firms that did not undertake any major brand campaign during this period. While positive chatter grows markedly during the time period as compared to the control firm, yet there is no systematic decrease in negative chatter or increase in the average ratings of the products during the time period. Advertising is also found to increase the virality and polarization of chatter. There is also a spillover effect seen across the firms in the market resulting in the increased in some of the chatter metrics of the competitors.

2 - "Only the Interested Learn" – A Model of Proactive Learning with Application to Product Reviews

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We develop a sequential learning model to analyze how consumers proactively acquire product quality information for their purchase decisions. While a rich literature exists on consumer learning of product quality, quality signals usually are treated as exogenous, or are byproducts of other actions such as purchase. Information processing, however, is a costly effort that would be undertaken rationally. A rich search literature attests to this point, although they mainly focus on price which is fully revealed upon search. Quality learning, in contrast, is a gradual process where consumers update their beliefs instead of knowing the true quality. We develop a dynamic model to analyze how consumers decide whether and for what product to acquire additional quality information. In our model, whether a consumer acquires additional quality signal of a product depends on the past information she received and her current information set. By endogenizing the information acquisition decisions, we can assess quality signals more accurately, and we show that in addition to the signals, the sequence in which they are received is also important. A rapidly growing literature on online product reviews shows that various metrics of product reviews are tied to sales, and learning models have been used as the micro-foundation of such effects. We apply our model to a rich dataset of online product reviews, which contains information on browsing and purchase. We find clear evidence of consumers rationally seeking new product reviews to refine their quality understanding. Our estimation reveals distinct types of information acquisition behaviors, and shows that taking product reviews as exogenous leads to biased estimate of both quality and precision. Our counterfactuals further show that product reviews a consumer sees early affect sales much more than later product reviews do.

3 - Drivers of Online Word of Mouth Review Level Valence: Evidence from the U.S. Brewing Industry

Jake Hoskins, PhD Candidate, University of Utah, David Eccles School of Business, 1655 East Campus Center Drive, Salt Lake City, UT, 84112, United States of America, jake.hoskins@business.utah.edu, Shyam Gopinath, J. Cameron Verhaal

Despite early evidence to suggest the volume of online word of mouth (OWOM) activity was most crucial in driving sales (Liu, 2006), it is now apparent that it is in fact the valence, or positive sentiment of review activity, which is primarily responsible for driving sales (Chintagunta et al., 2010). However, little empirical evidence exists about what factors drive the valence of online user generated reviews. Our research addresses this gap in the literature by investigating the influence of several factors in the valence generation process at the individual review level. Unique review data acquired from the U.S. brewing industry is used for the research and provides a substantively new context for study of OWOM. The beer industry is an interesting context ripe for study of the relative importance of various valence driving factors due to the juxtaposition of small, niche brands and large, mainstream brands. .Our research identifies key factors that drive individual review level word of mouth sentiment and derives important theoretical and managerial implications.

4 - The Structure and Evolution of Perceived Service Quality: An Analysis of Online User Reviews for Restaurants

Arvind Rangaswamy, Pennsylvania State University, The Smeal College of Business, University Park, PA, 16802, United States of America, arvindr@psu.edu, Kirthi Kalyanam, Peter Lenk

We develop a dynamic linear model to assess the structure and evolution of perceived quality, where there are period-to-period variations in unobserved quality, as is typical in service industries. In our empirical application, we use user reviews for a selected set of San Francisco restaurants, for which we have pretty much every review posted during 11 years (1998-2009). Reviewers provided overall quality assessments on a 5-point scale. We also converted each reviewer's comments into numerical scores by determining the number of positive and negative comments about food, service, and ambiance (FSA), thereby generating count data on positive and negative comments for each quality sub-dimension for each reviewer. The time-varying aspects of the quality dimensions are captured via a "structural model" in which state transitions are specified via a transition matrix that represents the interdependencies among the quality dimensions, and to the overall score. Restrictions on the parameters in the transition matrix allow us to test alternate specifications for the structural model, such as the halo effect model, formative model, and a VAR model. We estimate our model within a Bayesian framework with latent reviewer segments and transition matrices specified via a Hierarchical Bayes model. The VAR model with five "reviewer" segments has the best fit to the data. Our results also indicate that there is incremental information in reviewers' comments over and above the overall scores. We discuss the implications of our results for firms.

■ TA08

Room E304

Pricing: Perceptions

Contributed Session

Chair: Farid Tarrahi, M.Sc., European University Viadrina, Große Scharrnstrasse 59, Frankfurt (Oder) 15230, Germany, Tarrahi@europa-uni.de

1 - Do Round Numbers Influence the Likelihood of Consumer Debt Repayment?

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Prior research on numerical cognition has established that consumers confer special status on round numbers (i.e., zeros and fives) when processing numerical information. For example, an analysis of four years of data on Texas state lotteries revealed an exaggerated increase in ticket sales for $10 million jackpots, above and beyond the expected linear relationship between jackpot size and ticket sales. Similarly, research on ranked lists has shown that consumers expect items with ranks ending in zero or five to be significantly more favorable than the next item on the list, much more so than a simple monotonic trend would predict. Researchers have even determined that round numbers can serve as naturally-occurring reference points that influence task performance. For example, major league baseball players are four times more likely to end the season with a batting average of .300 compared to .299 and SAT test takers are much more apt to retake the exam if their score ends in '90' (e.g., 1190) versus '00' (e.g., 1200). In these examples, round numbers appear to serve as implicit goals that consequently influence motivation and persistence. The prior examples relate to approach motivation, in that the round-number goal (e.g., a 1200 SAT score) is positively valenced and represents a desirable event. In contrast, the present research examines instances where round-number reference points are negatively valenced (i.e., avoidance motivation), specifically when they represent consumer debt. We wondered whether consumers would be more or less likely to repay rounder-number debts relative to other (e.g., $*0/$*5 vs. $*9/$*4, and $*.0/$*.5 vs. $*.9/$*.4, etc.) debt amounts, after adjusting for absolute debt size. We investigated this question first in two field studies. In the first study, we obtained patron-level data on Seattle University library fine payments over a three-year period. In our data set, fines on late items end in either $*.20, $*.40, $*.50, $*.60, $*.80 or $*.00. Applying Cox Proportional Hazard model, we found significant evidence that patrons were 30% more likely to pay off library fines early when the balances ended in a rounder number (e.g., $*.50 and $*.00) than below or above a rounder number (e.g., $*.20, $*.40, $*.60, $*.80), after adjusting for absolute fine size. In a second field study, we examined data from an automated voice message service used by a cable company to collect on delinquent payments. Applying logistic regressions on a cross-section of 25,190 delinquent subscribers' binary decisions of whether to pay off the balance in 30 days, we found robust evidence that accounts with a balance ended in a round number (e.g. $*5, $*0, etc.) are twice more likely to be paid off than accounts with a balance ended in all other numbers (e.g. $*1, $*2, $*3, $*4, $*6, $*7, $*8, $*9 etc.). These results are obtained after all potential confounding factors are accounted for, such as the size of delinquent balance on the account, number of voice messages sent out, tenure of the account, number of different services the subscriber has, etc. We conjecture that the realization hypothesis may explain the observed results. Consumers attain sufficient motivation to act on an unpaid debt only when the realized debt looms large enough to warrant action; thus, consumers should be more likely to repay a debt only after it crosses a negatively-valenced round-number threshold (e.g., $500 or above). To confirm the mental process of this hypothesis, we plan to conduct a lab experiment, the result of which will be reported later.

2 - Attraction Effect on Brand Attitudes: An Econometric Analysis with Established Brands

Selin Erguncu, Doctoral Candidate, Koc University, Mashattan A5 Suite 178, Istanbul, Turkey, serguncu@ku.edu.tr, Serdar Sayman

The "attraction effect" occurs when a dominated option added to a choice set increases the choice share of the option it most closely resembles (Huber, Payne & Puto 198). Although it has been extensively studied, many studies on attraction effect employed similar settings, such as dominated brand exists versus absent, and obtaining preferences in the form of choice but not in other attitudinal metrics. However, changes in the category structure (i.e. perceived positioning of existing brands) can take place in other ways than new introductions, such as price increases and discounts. Current research offers an econometric analysis of the attraction effect on a 10 years of store and attitudinal data to investigate how perceptions of relative brand positioning influence consumer responses to brand actions. More specifically, assuming that quality and price are the two major dimensions, each brand is positioned on a product space. We operationalize a measure of dominance (that can be either zero or positive) according to the positioning of brands in this product space. Our main focus is the effect of price changes and dominance of a certain brand on sales and attitudinal metrics of competitive brands in a category. Our preliminary analysis suggests that the dominance of a brand intensifies the impact of its pricing actions on competitors. In particular, effectiveness of price discounts appears to be stronger, when the brand dominates another brand. Moreover, we see the attraction effect through attitudinal metrics as well. Specifically, a stronger case of attraction effect is observed for brand consideration than for brand liking. We believe that this research provides important insights that would not be intuitively concluded with the previous findings on attraction effect.

3 - Antecedents and Consequences of Price Fairness Perceptions: A Meta-analytic Study

Farid Tarrahi, M.Sc., European University Viadrina, Grofle Scharrnstrasse 59, Frankfurt (Oder), 15230, Germany, Tarrahi@europa-uni.de, Martin Eisend, Florian Dost

Price increases for certain products, e.g., energy prices, have made consumers more price sensitive, which led them to compare prices more intensively. Price comparisons trigger price fairness perceptions (PFP), which influence purchase behavior. Therefore, a better understanding of the origin of consumers' PFP is needed for marketers to achieve favorable market outcomes. Many studies have investigated the factors that influence PFP and its consequences, revealing sometimes different results. These studies provide a basis for our meta-analysis. In order to explain differences in previous results, we match macro-economic and cultural variables to the studies and investigate their influence. The variables have not been applied as moderators of PFP effects so far. We synthesize results from 166 independent samples in 123 manuscripts and run a meta-regression. The findings show that PFP has a significant effect on all consequences (behavior, behavioral intention, negative emotion, negative post-purchase behavior, perceived quality, perceived value, positive post-purchase behavior, price evaluation, satisfaction, and seller evaluation). The meta-analytic correlations are all high (between .409 and .850), with negative emotions showing the strongest effect. This indicates that PFP explains a considerable amount of consumer's reactions towards prices. For the meta-regression, we used annual GDP growth rate and Hofstede's cultural dimensions to test macro-economic and cultural influences on the relationship between PPF and its consequences. The findings show that GDP growth rate moderates significantly the influence of PFP on both positive and negative consequences: PFP is an important predictor in times of economic crisis, but loses importance in prosperous times.

■ TA09

Room E301

Competitive Marketing Strategy I

Contributed Session

Chair: Yung-Jan Cho, PhD Candidate, National Sun Yat-sen University, Dept. of Business Management, Kaohsiung, Taiwan - ROC, tonychuo@gmail.com

1 - Third Party Marketing Approvals

Cristina Nistor, Chapman University, 1 University Dr., Orange, CA, United States of America, nistor@chapman.edu, Catherine Tucker

When customers purchase new products, there is often a degree of uncertainty about their quality. A common solution is to rely on a third-party certifier to provide some form of accreditation that signals quality. However, the incentives of a third-party certifier may not be completely benign. Competitive certification markets may lead the certifiers to provide unduly positive evaluations of quality to gain market share or provide unduly negative evaluations in order to gain credibility with end-users. Based on competition models of certifier markets, this paper analyzes the consequences of allowing non-governmental parties to enter into the certification market for medical devices. We exploit an unusual natural experiment to evaluate the extent to which third-parties can be relied upon to correctly report product quality. We focus on the FDA's decision to allow third parties to prepare certification reports for certain medical devices, and observe how this decision to introduce competition at the reviewer stage has affected the quality of products allowed to go to market. We find evidence that allowing third party certification leads to significantly lower product quality. However, we find that experience with using a third party reviewer in the past diminishes the negative effect of reviewer competition.

2 - Strategic Product Line Design with Product Concept Demonstration

Taewan Kim, Assistant Professor of Marketing, Lehigh University, 621 Taylor Street, Bethlehem, PA, 18015, United States of America, tak213@lehigh.edu

Trade shows have become a popular venue for firms to demonstrate new products or new product concepts to their industry cohorts and to the public in general. In particular, trade shows provide an opportunity for a firm to communicate differentiating features of its new products on the horizontal and vertical dimensions. However, little research has been done regarding how the product concept demonstration activities interact with the firm's product line design strategy in competitive markets. In this study, the author develops a game-theoretic model of duopoly in which each firm produces two products with two product attributes that capture both vertical and horizontal differentiation (e.g., quality and design). The equilibrium results indicate that product concept demonstrations in trade shows may have the effect of preempting competition, as well as expanding the market size for both high and low quality products under certain market conditions.

3 - Strategic Implications of Collaborative Systems Based Recommender Systems

Sofiane Bahani, Koc University, Sariyer, Istanbul, Turkey, sbahani@ku.edu.tr, Skander Essegaier

In this paper, we investigate strategic effects of using collaborative filters based recommender systems. Collaborative filters are known to increase concentration sales. We propose a rational that might explain why such recommender systems are used rather than others that favor more sales diversity. Using a game theoretic approach, we show that it can be optimal for a firm to use a collaborative recommender as a tool to collaborate with a competing firm in concentrating sales on a narrower set of the most popular products. Increasing the base demand of the most popular products decreases the intensity of price competition in these products, but leads to increased price competition on the other products. However, the gain from the decreased price competition, that is from the increase of prices of the products that are most sold exceeds the loss from the decrease of the prices in the least popular products. We analyze a static model where the recommendations are not implicitly generated by sales. In this model, stores explicitly decide on which product they recommend and the quality of the recommendation is exogenous. This model can apply to any persuasive communication introduced by stores that increases consumers' valuation for the product promoted such as advertising. This allows us to understand the strategic dynamics at play and the incentives that stores have to coordinate and recommend the same product. Then we move on to a dynamic model where recommendation quality is endogenous and depends on the popularity of the product as measured by past sales. This captures what is unique about collaborative filter recommendation systems: that is they generate automated recommendations using the information accumulated in their data base about past sales.

4 - A Unified Model for Branding Campaigns of Various Kinds

Yung-Jan Cho, PhD Candidate, National Sun Yat-sen University, Dept. Business Management, Kaohsiung, Taiwan - ROC, tonychuo@gmail.com, Ying-Ju Chen, Chi-Cheng Wu

From advertisements, loyalty programs, consumer relationship management to brand identity initiatives, the complexity in marketing campaigns has grown with their variety. In this paper we propose a model whereby various types of campaign can be analyzed and compared in a unified framework. Extending the notion of transportation cost in a duopolistic Hotelling model, we allow two competing firms to manipulate their own and their rival's transportation costs via marketing campaigns. Different firms see different priorities between 'relieving competition' and 'enhancing competitive advantage', and these two (contradictory) strategic goals are satisfied by various campaigns in various ways. Therefore, firms' campaign strategies are contingent upon the characteristics of campaigns and the disparity in their market shares. The large and small firms each may increase or decrease differentiation, and each may gain or lose in certain campaigns. Some campaigns favor the large firm whereas others favor the small one; some campaigns are anti-competitive yet others are pro-competitive. In certain cases, firms' strategic interactions lead to intriguing outcomes: hostile intentions may incur reciprocal movements; pro-competition actions may lead to anti-competition results; functionally sophisticated instruments may become prisoners' dilemma; and high campaign cost may benefit the firms. From the theoretical standpoint, we supplement Hotelling model with the flexibility to cope with the growing complexity in branding campaigns. For practitioners, we suggest specific guidelines in a systematic perspective. When firms have choices among campaigns, we suggest how to engage; and when they have not, how to react.

■ TA10

Room E331

Understanding Customer Product Returns Decisions and Consequences

Cluster: Special Sessions

Invited Session

Chair: Tammo Bijmolt, Professor, University of Groningen, Nettelbosje 2, Groningen, 9747, Netherlands, t.h.a.bijmolt@rug.nl

Co-Chair: Alec Minnema, University of Groningen, Groningen, 9747, Netherlands, a.minnema@rug.nl

1 - Active Return Management for Online Retailers

Siham El Kihal, Goethe University, Frankfurt School of Finance & Management, Frankfort, Germany, elkihal@wiwi.uni-frankfurt.de, Christian Schulze, Bernd Skiera

High product return rates and their associated costs pose major challenges to online retailers. This research investigates whether online retailers always benefit from active return management by analyzing the potential for profit improvements in diverse product categories, then comparing the suitability of nine active return management strategies for realizing that potential. Our study contributes primarily to literature on product returns, in that it is the first study to compare the influence of customers and products on product returns, as well as to investigate strategies for active return management, beyond the formulation of return policies (passive return management). Moreover, this study is unique in its depth of information – in particular, the availability of data about the profit per item – and the breadth of products and product categories covered. Additionally, we contribute to literature on management heuristics by assessing different metrics, each intended to identify problematic customers and products. The analyses rely on an extensive data set from a large online retailer, including 5.9 million product purchases by more than 166,000 customers over a five-year period. The results confirm that retailers should focus their return management activities on managing customers, rather than products or some combination. Highly popular metrics – namely, the return rate and historic profit – actually perform poorly in identifying problematic customers and products; an alternative superior metric is historic profit after return cost. Even the best return management strategy will not benefit every online retailer though: Some product categories stand to experience profit improvements of up to 330% from good active return management, but others will hardly benefit.

2 - Perceived Risk, Product Returns, and Optimal Resource Allocation: Evidence from a Field Experiment

J. Andrew Petersen, University of North Carolina at Chapel Hill, Chapel Hill, NC, United States of America, Andrew_Petersen@unc.edu, V Kumar

Prior research on customer value and management has almost solely focused on the relationship between firm-initiated marketing communications and customer purchase behavior when maximizing profit through customer selection and optimal resource allocation. Even qualitative evidence from a survey of retailers suggests that relatively few retailers include other metrics, e.g. product returns, when measuring and maximizing customer value. However, these models ignore the role that product returns can play in shaping a customer's ongoing relationship with the firm. Thus, this paper makes two key contributions to the literature on customer value and management. From a customer value perspective, recent research has shown that product returns do play a key role in customer value through both their cost to firms and through their impact on increasing future customer purchase behavior through decreasing perceived risk. To address this issue, we first develop and empirically test a conceptual framework which integrates all three aspects of the firm-customer exchange process and quantifies the impact of including product returns in measuring and predicting customer value to the firm. From a customer management perspective, optimal resource allocation algorithms are often simulated and rarely applied in practice. To address this issue, we then conduct a large-scale customer selection and optimal resource allocation field study with 26,000 customers from an online retailer. In general we find that integrating customer product return behavior into a customer selection and optimal resource allocation strategy significantly benefits the online retailer both in terms of short- and long-term customer profitability.

3 - To Keep or Not to Keep: Effects of Customer-generated Content on Product Returns

Alec Minnema, University of Groningen, Groningen, 9747, Netherlands, a.minnema@rug.nl, Tammo Bijmolt, Sonja Gensler, Thorsten Wiesel

In Internet marketplaces, product returns are a substantial, expensive problem for retailers. Return rates reportedly vary between 10% and 50%, with substantial profit impact. Prepurchase information provided by the retailer affects product returns; so might customer-generated content (CGC). That is, prior research indicates that CGC affects product sales and conversion rate, but no research addresses its effect on product return propensity. Building on expectation disconfirmation theory, the authors formulate hypotheses about these effects, then test them with a rich database from a major online retailer that features transactions and two forms of CGC (reviews and Q&A) over three years and two product categories (electronics and furniture products). As this article demonstrates, CGC effects go beyond the moment of purchase and also affect postpurchase decisions to return or keep purchased products.

4 - The Impact of Online Product Reviews on Product Returns and Net Sales

Shuba Srinivasan, Professor, Boston University, 595 Commonwealth Ave., Boston, MA, United States of America, ssrini@bu.edu, Chris Dellarocas, Nachiketa Sahoo

A long literature in information systems and marketing has established the influence of product reviews on sales. However, most sales are not final and customers have the right to return products. Product returns are extremely costly for both manufacturers and retailers with lost revenues representing billions of dollars. High returns pose a particular problem for online retailers with return rates as high as 50%, with certain categories such as fashion goods experiencing even higher return rates. A complete understanding of the impact of product reviews on manufacturer and retailer's sales and profits must, thus, also examine how they influence product returns and final sales (i.e. sales, net of returns). Despite industry claims that product reviews lead to fewer returns, to the best of our knowledge, this question has not been previously addressed in academic research. We fill this gap by offering what we believe is the first academic study of the impact of product reviews on product returns and final sales. Reviews influence returns due to greater utility from improved expectations of fit and uncertainty reduction. Using a rich dataset from a US retailer with sales transactions in physical stores and online, consumer and product characteristics, and consumer-generated reviews, we investigate the impact of volume, valence, and textual content (e.g., subjective vs. objective) of reviews on product returns. Overall, this paper demonstrates the importance of product reviews in improving retailer performance on the path to purchase and beyond.

■ TA11

Room E334

Retailing: In-Store and Multichannel

Contributed Session

Chair: Vanessa Gartmeier, University of Cologne, Albertus Magnus Platz 1, Cologne, 50923, Germany, gartmeier@wiso.uni-koeln.de

1 - Shopper Resilience: Why Some Consumers Resist Shopping Stress and Some Don't

Lara Lobschat, Assistant Professor, University of Groningen, Nettelbosje 2, FEB, Marketing, Groningen, 9747AE, Netherlands, l.lobschat@rug.nl, Florian Pallas

In today's retail stores, consumers constantly face potential sources of stress while shopping. Previous research has identified different stressors (such as crowding, noise, etc.) which negatively influence consumers' reactions during their in-store purchase process. Yet, the extent to which certain stressors provoke stress responses in individuals (such as terminating a purchase) differs considerably. Despite this knowledge, little is known regarding individual trait differences that influence these various responses. This research explores a phenomenon that deals with the varying perceptions of and reactions to the same shopping event across individuals. Shopper resilience characterizes an individual's temporal stable trait to perceive shopping stress less intensely and to successfully overcome stressful shopping situations. First, the authors generate and validate a multidimensional measure of shopper resilience by identifying three dimensions. Next, they differentiate shopper resilience from related but distinct constructs of self-esteem, self-efficacy, and emotion regulation. The potential of the shopper resilience scale to extend our understanding of consumers' different stress perceptions as well as reactions is tested in a series of studies. Moreover, interaction effects of resilience with other shopping related factors (i.e., mood and shopping orientation) significantly influence consumers' shopping experience. The results provide valuable implications for in-store shopper marketing. More specifically, retailers should strive to reduce shopping stressors by establishing a shopper-centric store layout and by creating a stimulating store atmosphere to support non-resilient shoppers in their purchase process.

2 - How Store Design Influences Shopping Behavior?

Marina Kholod, Assistant Professor, Ritsumeikan University, 1-1-1 Noji-Higashi, Kusatsu, 525-8577, Japan, marina@fc.ritsumei.ac.jp

Shopping behavior is one of the important topics in marketing and retail management. With the availability of tracking technologies such as RFID (Radio Frequency Identification) in recent years, it became possible to study customers shopping behavior using RFID data, which reflects true customers movements comparing to the self-reported data collected through questionnaires. In this paper we fully exploit the advantages of this type of data with the purpose to examine grocery shoppers' moving patterns within the store and their influence on their buying behavior. As a result, we found out that attributes of shopping process, such as purchases, walking distance in the store and shopping time vary significantly, depending on the store design. As retailers would benefit from knowledge about how the store design relate to the buying behavior, managerial implications are proposed.

3 - The Impact of Store and Product Characteristics on Service Recovery Satisfaction in Online Markets

Erci Li, Postgraduate, Zhongnan University of Economics and Law, #1 South Nanhu Road, Wuhan,Hubei, Wuhan, HB, 430073, China, lierci901@gmail.com, Xinyan Liu

C2C online stores are facing more intensive customer service pressure than ever before. As resources are limited, how to balance distributive justice and interactional justice deserves study. In this study, the authors examined the effects of C2C online store characteristics and product characteristics on customer satisfaction. Drawing on the equity theory, they investigated how retailer reputation, price and product attribute influenced the relationship between different service recovery strategies based on customers' perceptions of justice and customer satisfaction towards service recovery. To test the study hypotheses, four 2 x 2 x 2 between-subjects factorial experiments have been conducted. The results show that retailer reputation and price function as moderators to adjust the relationship between different service recovery strategies and customer satisfaction but product attribute has no effect on this relationship. Service recovery strategies based on distributive justice is significantly more effective in increasing customer satisfaction when either retailer reputation or price is low, while strategies based on interactional justice is more effective when price is high. The authors concluded and discussed their findings and implications for both marketing theory and practice.

4 - The Effect of Perceived Product Distance on Consumers' In-store Purchase Decision Processes

Vanessa Gartmeier, University of Cologne, Albertus Magnus Platz 1, Cologne, 50923, Germany, gartmeier@wiso.uni-koeln.de, Gunnar Mau, Werner Reinartz

Retailing managers regularly face decisions regarding spatial distances in terms of how to present a product in store. As consumers' physical and psychological distance from a product strongly influences consumers' product preferences and choices, distance looms large at the point-of-sale (POS). However, there is little insight how consumers' in-store decision behavior (e.g., unplanned buying) changes depending on the actual and psychological distance at the POS. Thus, this study examines how the perceived product distance influences consumers' purchase decision processes in the store. In particular, our contributions to the literature are as follows: First, we identify a new antecedent of psychological distance, i.e., physical barrier – an instrument that is commonly used in retailing. Second, we examine the established phenomenon of psychological distance in a new context, i.e., in-store decision-making. Specifically, we investigate the effect of psychological distance on purchase decisions at the POS, such as unplanned buying and purchase abandonments – consequences that are of monetary importance to retailers. Third, we explain the underlying process by including process measures obtained from observations at the POS. Fourth, we show a mechanism that plays a major role in daily purchase decisions and hence, influences the effect of perceived product distance on in-store purchase behavior – purchase impulse. Fifth, in contrast to existing research that mainly uses lab experiments, we additionally conduct a field study which allows us to examine natural purchase decisions that are made unconsciously in the complexity of reality – an important extension when investigating psychological factors in daily purchase decisions, especially in unplanned buying.

■ TA12

Room W300

Customer Satisfaction I

Contributed Session

Chair: Meenakshi Rawani, Assistant Professor, FLAME, Gat no 1270, Lavale, Mulshi, Pune, 412115, India, meenakshi.rawani@flame.edu.in

1 - Media Coverage, Customer Satisfaction and Product Recalls: Is Bad Press Making Customers Jump Ship?

Michael Stradner, RWTH Aachen, Kackertstrasse 7, Aachen, Germany, stradner@win.rwth-aachen.de, Malte Brettel

Media shapes public opinion and influences customers. Product recalls often receive widespread media coverage, thereby harming a company's most important intangible asset: Customer satisfaction. Customer satisfaction is an important determinant of firm performance and has been studied extensively in academic research. However, little is known about the impact of media coverage on customer satisfaction in the event of product recalls, and the role of brand strength in this relationship. Consequently, this study seeks to advance marketing research in three ways: First, we explain the immediate impact of media coverage on customer satisfaction in the event of product recalls. We introduce media coverage as mediator between product recalls and customer satisfaction. Second, we introduce brand strength as moderator in the media-customer relationship. Third, we enhance the understanding of product recalls' impact on traditional and social media. This study is also of high practical importance: We aim to identify levers to minimize the negative impact of media reports on customers in the event of product recalls. Methodically, this study applies four approaches: Content analysis to analyze media coverage; event studies to measure the impact of products recalls; mediation to explain the impact of media coverage on customer satisfaction; and moderation to analyze the effect of brand strength. We analyze a unique dataset, gathered from multiple sources for customers/brands (YouGov BrandIndex, 5,000 interviews daily, 1,025 brands), media (LexisNexis, Topsy, socialmention) and U.S. consumer/automotive recalls (CPSC, NHTSA), covering the years 2008-2011 on a daily basis.

2 - Modeling the Impact of Service Crises on Customer Satisfaction Over Time

Maarten Gijsenberg, Assistant Professor of Marketing, University of Groningen - Faculty of Economics and Business - Department of Marketing, P.O. Box 800, Groningen, 9700 AV, Netherlands, m.j.gijsenberg@rug.nl, Harald van Heerde, Peter Verhoef

While firms realize that service quality is an import determinant of customer satisfaction, they are sometimes confronted with extreme service failures that have a profound impact on customers. For example, in 2011 customers of many Telco firms around the globe were confronted with severe internet connection problems of all Blackberry smartphones. As a consequence, these customers could not access Internet and e-mail using their Blackberry for an extended period of time. Also in other sectors severe service problems occur, such as strong delays for airlines or trains. A key question that has not been addressed in the literature is: how do services crises impact customer satisfaction over time? Do losses in performance not only loom larger than gains, but do they also loom longer? And do these effects depend on the prior performance conditions? To address these questions, we introduce a Double-Asymmetric Structural VAR model, capitalizing on recent developments in the time series literature. It allows us to study not only the short- and long-term effects of service performance, but also the differential effects of service crises vs service performance improvements. We analyze data from a major European public transport company, spanning nearly 7 years of monthly performance and satisfaction observations. During this period, multiple service crises occurred in which the performance dropped dramatically due to severe problems with equipment and external circumstances (i.e. extreme weather). Our results show that losses not only loom larger (short run) than gains, but losses also have more persistent (long run) effects on satisfaction than gains. The strength and persistence of the satisfaction effects also strongly depend on the prior performance of the service provider.

3 - Customer Satisfaction, Risk Metrics and Media Coverage – Is Customer Satisfaction the Antidote?

Lukas Traub, RWTH Aachen University, Kackertstr. 7, Aachen, 52072, Germany, traub@win.rwth-aachen.de, Malte Brettel

Marketing-finance-interface literature highlights the importance of customer satisfaction as indicator for financial performance. However, little attention has been paid to the link between customer satisfaction and firm-specific risk. Furthermore, recent global financial crises emphasize the importance to understand downward risk, i.e. cluster risk during times of market downturns. In addition, the influence of media on valuations has increased substantially but is not yet adequately reflected in theoretical frameworks. This study aims to advance current research in three ways: Firstly, we enhance the understanding of customer satisfaction as early indicator for idiosyncratic risk. Secondly, we enhance the marketing-finance-interface by shedding light on the moderating role of media coverage. Thirdly, we analyze the enhanced importance of customer satisfaction as dampening factor against downward risk. This is also of high practical relevance as it establishes customer satisfaction management as measure of precaution. Additionally, to our best knowledge this is the first study to combine customer satisfaction and firm-specific risk metrics with a dataset on a daily basis. This enables this study to shed light on the short-term, high-frequency relation between customer satisfaction and risk metrics. Methodologically, several approaches are combined: content analysis to determine the amount of media coverage, risk decomposition (Carhart four-factor-model), time series analyses and event. Different datasets for customer satisfaction (5,000 interviews daily; 400 companies),risk metrics, and media (print and social) create a unique dataset for 2008-2011.

■ TA13

Room W330

Marketing & Financial Performance I

Contributed Session

Chair: Kapil Tuli, Associate Professor of Marketing, Singapore Management University, 50 Stamford Road, Singapore, Singapore, kapilrtuli@smu.edu.sg

1 - Herding Mechanisms in Advertising Spending Voluntary Disclosure

Huanhuan Shi, Doctoral Student, Pennsylvania State University, Smeal College of Business, University Park, PA, 16802, United States of America, hus16@psu.edu, Rajdeep Grewal, Shrihari Sridhar

While making strategic decisions such as market entry, new technology adoption, and new product introduction, firms may observe and mimic peers to reduce uncertainty. In this study, we provide causal evidence for the presence of herding and its mechanisms in firms' advertising spending disclosure decisions. Firms advertising spending disclosure decisions are strategic; while advertising spending data is informative for both investors and competitors, the consequence of disclosing advertising spending is uncertain due to the complexity of the dynamics of capital market and product market. We propose herding as an uncertainty resolution tool when firms decide whether to disclose advertising spending. The SEC's reporting rule in 1994 shifted advertising spending disclosure from a mandatory disclosure regime to a voluntary disclosure regime; we exploit this regulation change to identify herding effects and their mechanisms. We model the firm's disclosure decision as annual binary choice and identify herding effects while accounting for confounding effects such as spurious correlation. We find robust evidence for herding behavior among peer firms within the same industry. We differentiate between two underlying sources of convergence of disclosure decisions: information externalities and financial externalities. We find support for the information externality based herding model and identify learning from high status firms as the main mechanism for herding in advertising spending disclosure.

2 - What Should be the Dependent Variable in Marketing-related Event Studies?

Emanuel Bayer, Goethe University Frankfurt, Grüneburgplatz 1, Frankfurt, Germany, embayer@wiwi.uni-frankfurt.de, Lisa Schöler, Bernd Skiera

Most event studies rely on cumulative abnormal returns on stock prices as their dependent variable. Stock price, respectively market capitalization or shareholder value reflects the value of the operating business plus non-operating business minus debts. Yet, many marketing-related events often much stronger affect the value of the operating business than nonoperating business and debts. Therefore, this article argues that the cumulative abnormal returns on the value of the operating business might be a valid dependent variable in many marketing-related event studies. The cumulative abnormal return on the value of the operating business is the ratio of the cumulative abnormal return on stock prices and the firm's leverage effect. An empirical study of 2,731 firms outlines that the leverage effect is on average larger than 1. Ignoring leverage effects is likely to lead to an over- or underestimation of marketing's impact and may even lead to incorrect conclusions about whether marketing created or destroyed value. The replication and reanalysis of a published event study also illustrates that coefficients, significance levels, and implications may change when ignoring firms' heterogeneous leverage effects.

3 - How Incentives Shape Strategy: The Role of Equity Incentives in Inducing Myopic Marketing Management

Martin Artz, Frankfurt School of Finance & Management, Sonnemannstrafle 9-11, Frankfurt, Germany, martinartz@gmx.de, Natalie Mizik

We examine the role personal compensation incentives of a CMO and CEO play in inducing myopic marketing and R&D management. We find that CEO equity incentives are largely unrelated to the incidence and severity of myopic manipulation of marketing and R&D. CMO equity compensation stake, on the other hand, are highly predictive of the incidence and severity of myopic marketing and R&D cuts. Contrary to common belief that a presence of a CMO in the organization can help maintain customer focus and support for marketing departments, we find that CMOs not only fail to prevent myopia, but further exacerbate the problem as the market-based (i.e., equity) proportion of their personal compensation increases. We also find that competitive intensity in the industry moderates the relationship between CMO equity compensation and myopia: competition serves as a disciplining mechanism as the negative effects of equity compensation are diminished in more competitive environments. Moreover, CMOs (but not CEOs) exploit increases in the share price due to earnings inflation by selling significantly more shares in myopic than in non-myopic years. Our findings highlight the pitfalls and limitations of over-reliance on equity in managerial compensation packages. They further shed a new light on the role of the CMO in making marketing resource allocation decisions.

4 - A Disaggregated Examination of the Financial Effects of Customer Satisfaction

Kapil Tuli, Associate Professor of Marketing, Singapore Management University, 50 Stamford Road, Singapore, Singapore, kapilrtuli@smu.edu.sg

Do higher sales and cash flows provide the financial muscle needed to enhance customer satisfaction? Or is it that customer satisfaction enhances future sales and cash flows and lowers the future costs of producing and selling for the firm? Drawing on a sample of publicly listed firms, the authors conduct a Simultaneous Equation Panel Data analysis to explore these research questions. Results show that a firm's customer satisfaction is both influenced by and affects the sales, costs of producing and selling, and cash flows. Importantly, there is significant heterogeneity in these effects across firm, industry, and macro-economic indicators. The study concludes with a discussion about the implications of these results for marketing managers and theory.

■ TA14

Room W100

Advances in Choice Modeling I

Contributed Session

Chair: Kamel Jedidi, Professor, Columbia University, 518 Uris Hall, 3022 Broadway, New York, NY, 10027, United States of America, kj7@columbia.edu

1 - Exploring Ipsative Data Problems in 'Best-Worst Scaling' Method

Paul Wang, University of Technology, P.O. Box 123, Sydney, 2007, Australia, Paul.Wang@uts.edu.au, Shehely Parvin

Due to advantages of the Best-Worst Scaling (BWS) method, it has been well established in recent years as the preferred method in consumer value measurement to overcome the inherent biases of traditional rating scales (Louviere et al. 2013; Marley & Louviere 2005). In spite of the growing use of the BWS method, the scoring procedures for BWS produce ipsative data (a common total test score for all individuals). Ipsative data violate the basic assumption of classical test theory even though a meaningful intra-individual comparison is possible. Lee, Soutar, and Louviere (2008) claimed that the square root of the best count divided by the worst count (Sqrt(B/W) scoring procedure should be free from the ipsative data problem and that factor analysis could be performed well.

Moreover, Davidson (2013) used Best-Minus Worst (BMW) scoring procedure and dropped one item to test the measurement model via classical test theory to go around the ipsatization problem. However, no concrete evidence has been presented to support their claims. Therefore, we measured both personal values and perceived consumption values with BWS method in a service-related study and used factor analysis and structural equation modeling to investigate the ipsative data problem. We provide evidence to show that Sqrt(B/W)-scored data are still not free from the ipsative data problem. We also show that dropping one BMW score is not the appropriate solution for the ipsative data problem. Finally, we explore the use of item response modelling and suggest avenues for future research to tackle the problem.

2 - Random Regret Minimization: An Introduction with Empirical Tests

Keith Chrzan, SVP Sawtooth Analytics, Sawtooth Software, 996N 250E, Chesterton, In, 46304, United States of America, keith@sawtoothsoftware.com, Jefferson Forkner

The authors introduce Random Regret Minimization, a new choice modeling paradigm currently getting attention in the travel demand modeling literature. The session will explain how to recode a standard discrete choice experiment into an RRM model and will discuss some of the interesting features of the RRM model (i.e. it does not assume IIA). After reporting the results of some empirical comparisons of RRM and standard choice-based conjoint models we conclude with practical advice regarding the strengths and weaknesses of RRM based on our experience.

3 - Elimination by Predictions

Daniel Zantedeschi, WCAI Post-Doctoral Fellow, University of Pennsylvania, Wharton School of Business, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, zdan@wharton.upenn.edu, Peter Fader

While random utility theory has long been the main paradigm for discrete choice modeling, there is also a rich history of researchers proposing simpler heuristics to capture the essence of the choice process from a behavioral perspective. We attempt to bridge the gap between these two research streams by bringing three new twists to the heuristic-based choice literature. Specifically, we formally integrate three common sources of dynamics into the well-respected “elimination by aspects” (EBA) framework: (1) we allow for uncertain preferences for attribute levels along with the updating process that occurs with repeated exposures to product characteristics; (2) we accommodate forward-looking choice behavior, and (3) we allow decision-makers to forecast the presence of attributes that are uncertain over time (e.g., temporary promotions). By bringing all of these dynamics into the EBA model, we call this new approach “elimination by predictions” (EBP). Similar to the EBA, at each stage of the decision process, the individual eliminates all the options not having a sufficiently high expected/predicted level, until one only option remains. We also present a novel way to integrate both price and promotions into the EBP model, allowing us to derive aggregate demand curves and their implications for revenue management. We estimate the model using a new MCMC algorithm using a detailed attribute-level dataset covering the fabric softener category, and we test for the empirical support of the different features of the model both in- and out-of-sample.

4 - Error Theory for Elimination by Aspects

Kamel Jedidi, Professor, Columbia University, 518 Uris Hall, 3022 Broadway, New York, NY, 10027, United States of America, kj7@columbia.edu, Rajeev Kohli

Elimination by aspects (EBA) is a model of bounded rationality that is considered to represent consumer choice more accurately than standard logit and probit models. One limitation of EBA has been the lack of an error theory that accounts for the dependence of aspect choices across stages. We show that EBA can be derived by assuming that aspects have utilities with independent extreme value distributions. We compare the empirical performance of EBA, multinomial logit model and nested logit model using data on transportation choices. The EBA model assumes that aspect utilities are functions of traveler’s income, travel time and waiting time. The multinomial logit model and the nested logit model assume that the utilities of alternatives are functions of the same variables. EBA performs better than the other two models, both in estimation and holdout predictions. EBA captures violation of IIA to a greater extent than the nested logit model, since the latter only allows between-nest violations of the property.

■ TA15

Room W130

Understanding Consumer Behavior in Emerging Markets

Contributed Session

Chair: Huma Amir, Institute of Business Administration, University Enclave, University Road, Karachi, 75270, Pakistan, huma.amir@hotmail.co.uk

1 - Materialism and Consumer Attitude towards Debt: Spendthrift or Tightwad

Farah Naz, Lecturer, Karachi University, Institute of Business Administration, Karachi, Pakistan, fbaig@iba.edu.pk, Faryal Salman

Recently there has been an upsurge in the advertisements persuading people to save. These communications are not just directed towards the elderly population but also towards the youngsters. Ironically, Pakistan has also seen a dramatic increase in malls and the international/local brands. The core objective of this research is to determine the consumer attitudes towards debt. Are the Pakistani consumers inclined towards obtaining debt to satisfy their materialistic desires? Have they become more spendthrift or tightwad? Review of relevant literature was conducted to develop the conceptual frame work. The triangulation approach is used for this research. A survey comprising of 300 students, aged 18-26 enrolled in the undergraduate and graduate classes in Business schools is being conducted after the successful completion of two focus groups. The instrument used for the study is the consumer attitude towards debt scale (Lea, Webley and Walker, 1995) and the spendthrift-Tightwad scale (Rick, Cryder, and Loewenstein, 2008). The Data will be analyzed with factor analysis, regression and descriptive. The results of the survey research will be reported once the survey is completed. However the focus groups conducted in Karachi indicated that the young female consumers are more short term oriented and less inclined towards saving while the males understand the importance of saving and save a certain percentage of their earning/pocket money for the future. The findings of the research are useful for the marketers in developing product offerings for the young consumers both in terms of saving schemes and loan schemes. It will also help marketers in segmentation, targeting and positioning. In Pakistan very few researches have been conducted in this area. This research will definitely contribute to the body of knowledge.

2 - Measurement of Quality of Competition of Tourism Destinations in Emerging Economy

Srabanti Mukherjee, Assistant Professor, Birla Institute of Management Technology, IDCO Plot 2, Gothapatna, Bhubaneswar, Odisha, 751003, India, srabanti.mukherjee9@gmail.com, Atanu Adhikari

The tourism literature of late nineties (Crouch & Ritchie, 1999; Pearce, 1997) puts forth that the key measurement parameters for quality of any tourism destination are its perceived competitive advantage and destination uniqueness vis-à-vis its competing destinations. Stretching beyond the National Diamond Framework of Competitive Advantage by Micheal Porter (1990), in the present study, with the existing literature we have identified the constructs and developed the measurement scale for understanding the competitive strength of a destination brand using a “double diamond framework for Competitive advantage”(Rugman, AAM., & D’Cruz, J.R., 1993). The scale has been tested on pilot segment in online mode. The scale reliability was checked by using Guttman’s Split Alpha Reliability coefficient and Cronbach’s alpha values. The values were statistically consistent as the alpha values exceeded .80 in each case. The construct validity has been checked both by text mining and member-checking mechanism(Riley, 1996). The content validity was judged following the content validity ratio propounded by C. H. Lawshe (1975). So far most of the studies on destination branding primarily focused on the quality of monetary and non-monetary values rather than the double diamond framework. Therefore, developing a scale to measure the competitive strength of a destination brand itself is a pioneering attempt. The study can be widely used as a survey instrument by the state/ national tourism departments, destination management organizations and travel agency to decide upon their marketing mix strategies to provide them optimum edge in the double diamond framework.

3 - Understanding Affluent Consumers’ Luxury Goods Purchasing Behavior in China

Guoqing Guo, Professor, Renmin University of China, Mingde Building, Rm. 826, Beijing, China, Guoguoqing@rbs.org.cn, Xia Wang

Luxury goods consumption has been booming in China since the early 1990s with the quick development of Chinese economy. In 2013, the Greater China region has become the 2nd largest luxury goods market in the world with around 4% growth and the Chinese consumers become more sophisticated and diversified on consuming the luxury goods. The continuous growth of this market bring in questions about why that consumers buy luxury goods and what perceptions have the most impact on their purchasing behavior. It is important for marketers of luxury goods to understand their customers’ actual purchasing behavior and design the appropriate offerings and marketing strategies to satisfy them. This study investigates which and how potential antecedents relate to actual luxury purchase among affluent Chinese consumers. We examine three types of predictors in an integrated model: luxury goods consumption motivation, life satisfaction, and demographic variables. A survey study with 618 affluent respondents reveals that social adjustment motivations and life satisfaction significantly enhance their luxury goods purchases. Moreover, demographic characteristics such as age, education level and gender also influence the buyers’ luxury purchasing behavior. We find that the younger generations with oversea education background and the female Chinese have higher incentive to buy luxury goods.

4 - A Study of the Changing Cultural Trends in Gold Gift-giving at Weddings in a Developing Country

Huma Amir, Institute of Business Administration, University Enclave, University Road, Karachi, 75270, Pakistan, huma.amir@hotmail.co.uk

The Indo-Pak subcontinent has long followed the tradition of presenting heavy gold jewelry to brides at weddings. Traditionally, a middle-income family has been expected to present at least one heavy 22-carat gold set, complete with necklace, ring, and ear rings and at least four 22-carat gold bangles to the daughter on her wedding. The bride is also expected to receive a similar gift from her immediate in-laws in the same manner. This activity evolved from the need to provide a means of investment for the bride in case she required money at some point in her life, but with the passage of time, jewelry has been passed down generations as family heirloom and selling it in order to invest in some other venture is seen as disrespectful in many family circles. Not giving one's daughter gold at her wedding has been considered as lowering the daughter's worth in the eyes of her husband and in-laws. With the increasing inflation rates and diminishing disposable incomes, consumers are finding it difficult to keep up with this traditional lifestyle. Lavish gold gifts are becoming hard to afford and a shift is seen towards preference for gold-plated and artificial jewelry at weddings. This study examines the extent of change in attitudes of consumers towards bridal gold jewelry and has its foundation on the self-concept and lifestyle theories (Lekakos & Giaglis, 2004; Vigneron & Johnson, 1999). A sample of 129 women comprising of mothers-in-law-to-be and brides-to-be belonging to middle-income social classes B and C reveal that although wearing heavy gold jewelry at weddings is not considered as a way of showing off one's wealth and status, gold no longer appears to play a pivotal role in establishing status and worthiness. A model was developed on the basis of insights gained from two focus groups of representative respondents and the focus groups revealed important factors to be tested as "conformity to social norms", "perceived theft and security concerns within the city", "materialism", "consumer psychographic characteristics", and "financial security". Cluster analysis identified two distinct segments: group 1 considered themselves more trendy, modern in their outlook, and rather spendthrift, who preferred to have their own individual fashion style and were concerned about their looks. Group 2 showed less inclination towards modernity, although they refrained from calling themselves traditional, were more careful in their expenditure, were less concerned about their looks, and rated higher on making their own personal fashion statement. It was revealed that whereas security issues and fear of theft were considered transient features that deterred brides from wearing gold jewelry on their wedding day, fashion and a more modern outlook resulted in an attitude shift to stylish, non-traditional jewelry of less expensive. This was more so in Group 1 than in Group 2 who still insisted on possession and presenting of gold jewelry even when the bride wore contemporary non-gold fashionable ornaments that matched the bride's outfit on the wedding day. The study also reveals that though gold is still being bought in abundance, and will continue to do so for the near future, a trend has been set which will gain momentum as consumer choices increase and tolerance towards non-conformity to the norm of gold adornment increases. This finding has implications for goldsmiths and gold jewelry shop owners who may take proactive action by investing in other cheaper metals and providing non-traditional fashionable designs in precious and semi-precious stones.

■ TA16

Room W320

Advances in Promotions Research

Contributed Session

Chair: Daniel Sheehan, PhD Student, Georgia Tech, College of Management, 800 West Peachtree Street, NW, Atlanta, GA, 30308, United States of America, dsheehan3@gatech.edu

1 - Do Price Promotions Affect Price Sensitivity? Evidence From a Large Scale Field Experiment

Pedro Gardete, Stanford University, Graduate School of Business, 655 Knight Way, Stanford, CA, 94305, United States of America, gardete@stanford.edu, Carlos Noton, Andres Elberg, Rosario Macera

Do price promotions affect consumers' sensitivity to prices? Is the impact of price promotions on price sensitivity circumscribed to the promoted category or does it translate to other non-promoted (and possibly unrelated) categories? Answering these questions is crucial for managers in the retail industry who need to evaluate the short and long run profitability of price promotions. For academic researchers, studying these questions and their underlying mechanisms is important as it can lead to a better understanding of consumers' preferences and the economic environment in which their decisions are embedded. Addressing these questions, however, is difficult. First, inferences made on the basis of historical data (which is standard in the literature) are plagued by endogeneity problems. Second, isolating price sensitivity from confounding factors is often challenging. Examples of such confounds include intertemporal substitution (stockpiling or strategic delays caused by promotions), interbrand substitution (decreased degree of brand loyalty after a price decrease) and quality inferences (e.g., promoted perishable goods can be perceived as low quality). To address these concerns, this paper studies price sensitivity using a large-scale field experiment. We partnered with two large supermarket chains in Chile and exogenously varied price promotion depth in 17 categories across 24 stores over a ten-week period. Using a between-stores randomized design, we manipulate the promotion depth in the first half of the experiment (30\% versus 10\% discount), and keep it constant during the second half of the experiment (10\% discount for all stores). In other words, the control stores had a uniform depth of promotions (10\% price reduction over 10 weeks) while the treatment stores had a 30\% price reduction the first 5 weeks and 10\% price reduction from week 6 onwards. We complement the experimental data with scanner panel data of customers shopping at the treatment and control stores. We cover a wide range of categories to be able to test for spillover effects. We find that price promotions have striking within-period effects on quantities and revenue. Furthermore, we find evidence of strong spillover effects to non-promoted categories (this result holds even for unrelated categories). Preliminary results suggest that the impact of promotion depth on price sensitivity is highly heterogeneous across categories. We use the variation between categories and individual characteristics of consumers to explore potential mechanisms for our results.

2 - Coupon Usage Changes in Rural Communities

Ron Larson, Associate Professor, Western Michigan University, 1903 West Michigan Ave, Haworth College of Business, Kalamazoo, MI, 49008, United States of America, ron.larson@wmich.edu

Discount coupons continue to be a common marketing tool for consumer packaged goods manufacturers. Some marketers choose to distribute their free standing insert coupons in metropolitan areas, so consumers in rural communities tend to receive fewer coupons. Store intercept surveys were conducted in one rural community in the Midwest during 1984, 1999, and 2012 and in another community in a different state during 1999 and 2011. A total of 1648 people responded to the surveys. Coupon usage in the five survey waves ranged from 86 to 91 percent. Active searching for coupons appeared to rise during this time frame but the two communities had different trends for the number of coupons redeemed per shopping transaction. This research will explore how and why discount coupon usage patterns in these two rural communities changed during the time period covered by the surveys.

3 - Measuring the Effects of Different Types of Retailer Targeted Coupons on Retailer Profits

Alexander Chaudhry, Doctoral Candidate, Rice University, 6100 Main Street, Houston, TX, United States of America, alexander.chaudhry@rice.edu, Seethu Seetharaman, Carrie Heilman

We empirically estimate the expected basket-level demand effects and, therefore, the expected store profit effects, of three different types of retailer targeted coupon campaigns used by a national supermarket retail chain. The three types of campaigns differ in terms of household-level customization and personalization. One campaign employs a one-to-one approach by targeting a set of selected households with a unique bundle of coupons customized to that household's preferences (high customization). Another promotes a bundle of brands around a theme (i.e., back-to-school, new baby, etc.) relevant to the household, but where all households receiving the promotion receive the same set of coupons (medium customization). The third provides a limited number of coupons for one brand in a single category relevant to the consumer, but where again all households targeted with the promotion receive the same promotional materials and coupons (low customization). To accomplish the above, we build and estimate an econometric model of a household's contemporaneous purchase incidence outcomes in 28 product categories, together with a household-level store choice model. Our basket-level demand model captures pair-wise cross-category dependencies in purchase incidence outcomes of a household in a flexible manner as a function of exposure to the three retailer promotion types described above. Such dependencies have not been modeled across such a large number of categories in previous research and doing so allows us to measure the effect of each of the three targeted campaign types on expected retailer profit after correctly accounting for cross-category spillovers within a basket of categories. We estimate our proposed multi-category purchase incidence model on purchase data of 800 households over 102 weeks, obtained from a retailer's loyalty card database. The results from our study provide insights to retailers about the value of investing in more customized promotional efforts, and with a detailed cross-category glimpse of where such value is gained.

4 - The Influence of Temporal Distance on Promotional Redemption During a Shopping Experience

Daniel Sheehan, PhD Student, Georgia Tech, College of Management, 800 West Peachtree Street, NW, Atlanta, GA, 30308, United States of America, dsheehan3@gatech.edu, Koert Van Ittersum

Traditionally, shoppers encounter price promotions either before entering a store or at the moment of choice (Blattberg et al. 1995). Yet, with the proliferation of consumer facing technology, such as smartphones or smart shopping carts, retailers and manufacturers have a greater level of flexibility as to when to engage shoppers with promotions during a shopping experience. In this research, we propose that the temporal distance between being presented with a price promotion and encountering the promoted products during a shopping trip influences the redemption likelihood. Specifically, we demonstrate that with the redemption likelihood increases with the increased temporal distance. This research makes two important contributions. First, we are among the first to examine how consumer make distinct inferences about products by increasing the temporal distance between the promotion and product within a single shopping trip. Second, we significantly extend the literature on Construal Level Theory (Trope & Liberman 2006) by demonstrating how the level of a construal about a promoted product changes within a shopping trip as a function of only a few purchases.

Thursday, 10:30am - 12:00pm

■ TB01

Room E130 (Aud.)

Customer Behavior and Strategic Firm Response

Cluster: Special Sessions

Invited Session

Chair: Pedro Gardete, Stanford University, Graduate School of Business, 655 Knight Way, Stanford, CA, 94305, United States of America, gardete@stanford.edu

1 - Strategic Inventory

Oeystein Dalijord, Stanford University, Stanford, CA, United States of America, daljord@stanford.edu

A classic durable goods pricing problem occurs when forward looking consumers might hold out on a current purchase in expectation of future discounts. Faced with forward looking consumers, firms might choose to strategically constrain their capacity to dissuade consumers from strategically timing their purchases. A consumer who sees that the firm is about to stock out will unlikely expect sizeable future price discounts and will be encouraged to buy the product while it is still available. Similarly, a consumer that sees a large inventory might be persuaded to wait out for future discounts. To what extent consumers are forward-looking is an empirical question and depends on correctly estimating the unobserved price expectations. Typically current prices are used as predictive of price expectations. That is troubling for dynamic demand estimation as a decrease in the current price not only makes the product currently more attractive, but also affects the expectations of the future prices. It is then hard to separate out the impact of current prices from expectations of future prices on current purchase behaviour. Inventory is however a variable that affects the inter temporal trade off without affecting the utility of the product itself. Using variation in inventories and sales data from off-season sports goods, I estimate the impact of inventory on price expectations and purchase behaviour. I then ask how firms can profitably reveal their inventory levels to encourage early purchases.

2 - Advertising through Email Promotions: Field Experiments at an Online Ticket Reseller

Navdeep Sahni, Stanford University, Stanford, CA, United States of America, sahni_navdeep@gsb.stanford.edu, Dan Zou, Pradeep Chintagunta

This paper aims to understand the effect of targeted email offers. Using multiple randomized field experiments in collaboration with a major online event-ticket reseller, we find that email offers cause an increase in expenditure by individuals receiving the offers. An email offer in our data causes a $3 increase in spending on average across experiments. Surprisingly, most of the increase in spending is not driven by redemption of the offers. Also, there exists evidence suggesting that the offers have carry-over effects across time, and spillover effects across genres. These findings suggest that email offers can have an advertising effect, which informs our understanding of the underlying mechanism.

3 - Voluntary Product Safety Certification

Shubhranshu Singh, Johns Hopkins University, Baltimore, MD, United States of America, shubhranshu.singh@jhu.edu, Ganesh Iyer

This paper describes how market forces create incentives for firms to seek product safety certifications. We consider a firm which makes the decision of whether or not to seek certification prior to selling the product. Consumers choose to be careful or negligent while using the product. The probability of an accident depends on both the consumer's effort and the product safety. We show that, even when both the firm and consumers have same beliefs about the product safety, the presence of consumer moral hazard can create incentives for certification. Consumers' choice of effort may change as they update their beliefs upon observing a certification outcome. The consumer surplus that is thereby generated may be extracted by the firm through higher prices creating incentives for certification. Interestingly, if the certification decision is private information to the firm, the presence of consumer moral hazard may lead to more certification if safety and effort are substitutes but less certification if they are complements. If safety and effort are substitutes, a negligent product use hurts the consumer more when using a non-certified product compared to when using a certified product. This makes the certified product more valuable to the consumer. As a result, the certification equilibrium exists over a larger set of conditions. On the other hand, if safety and effort are complements, a negligent product use hurts the consumer more when using a certified product. The certified product becomes less valuable causing the certification equilibrium to exist over a smaller set of conditions.

4 - Understanding Social Effects in Buying Behavior: Evidence from In-flight Purchases

Pedro Gardete, Stanford University, Graduate School of Business, 655 Knight Way, Stanford, CA, 94305, United States of America, gardete@stanford.edu

This paper investigates the role of social effects in consumption decisions. It uses detailed data on purchases made by airline passengers through entertainment systems located in front of them. We find social effects have a large impact on purchasing behavior: An exposure to a lateral purchase increases the probability of buying an item in 30%. Moreover, these effects also take place at the category, sub-category and upc levels. Social effects are found to take place mostly through consumption expansion. Positive spillovers across different types of products are more frequent than consumption switching. The number of neighbors seen buying is found to affect the magnitude of social effects. However, no effects related to the size of transactions observed or to the absence of neighboring purchases are found. While we do not find evidence supporting standard information observational models, we posit that a mix of awareness and information mechanisms drive the social effects in our data.

5- Strategic Category Development in Two-sided Platforms

Yakov Bart, INSEAD, Singapore, Singapore, yakov.bart@insead.edu, Hui Li, Qiaowei Shen

The popularity and importance of two-sided market platforms have grown rapidly with the rise of the digital economy in recent years. While some platforms concentrate on providing a marketplace for a single product category, others feature multiple categories of goods and services. This paper focuses on the traffic-generating and revenue-generating abilities of different platform categories and examines the role of these attributes in strategic market development in a dynamic competitive environment. In a two-category model simulation, we show how platforms can strategically modify relative investments in developing different categories to maximize total revenues. We then illustrate the model's applicability by examining two-sided multi-category platforms in the daily deals industry. Using longitudinal daily deals data from all major US markets, we estimate a simultaneous equation model to empirically identify the direct and indirect network effects as well as the competition effect within and across platforms for each major deal category. We find strong evidence for multiple differences in estimated effects across categories and identify categories with higher and lower traffic-generating and revenue-generating abilities. We discuss why certain categories develop before others as well as why the relative importance of categories to a platform changes as markets evolve.

■ TB02

Room E208

Online Markets

Cluster: Special Sessions

Invited Session

Chair: Anja Lambrecht, Assistant Professor, London Business School, Sussex Place, London, NW1 4SA, United Kingdom, alambrecht@london.edu

1 - Substitution and Synergies Between Online and Offline Retailing

Avi Goldfarb, Toronto University, Toronto, ON, Canada, agoldfarb@rotman.utoronto.ca, Kitty Wang

The academic literature consistently finds that online and offline channels substitute for one another; however, traditional retailers are increasingly expanding to online channels, often citing "synergies" between online and offline activity. In this paper, we use evidence from store openings by a bricks-and-clicks retailer to reconcile these different perspectives. We document that when a new store opens offline, local offline sales rise and local online sales fall slightly. Thus, on average there is neither strong evidence of substitution nor of synergies in the form of complementary in demand. However, splitting locations by whether the retailer has a strong presence prior to the store opening suggests the presence of both substitution across channels and complementarity in demand. In particular, in places where the retailer has a strong presence, the opening of an offline store is associated with a decrease in online sales and online search (and, unsurprisingly, an increase in offline sales). In contrast, in places where the retailer does not have a strong presence, the opening of an offline store is associated with an increase in online sales and online search (and a relatively large increase in offline sales).

2 - Inventory Showrooms and Customer Migration in Omni-channel Retail: The Effect of Product Information

David Bell, University of Pennsylvania, The Wharton School, Philadelphia, PA, United States of America, davidb@wharton.upenn.edu, Santiago Gallino, Antonio Moreno-Garcia

Omni-channel environments where customers can shop online and offline at the same retailer are increasingly ubiquitous. Furthermore, the presence of both channels has important implications for customer demand and operational issues such as product returns. We propose that, given the opportunity, customers selfselect into channels based on their need for visceral product information, i.e., the need to touch, feel, and sample physical products before purchasing. From this core idea, we develop a simple model of channel matching; it predicts that customers with a higher need for information prefer physical access to all products and that the introduction of an offline inventory display channel where none previously existed results in a more efficient match between customers and channels. Using data on display showroom introductions by WarbyParker.com, a leading US eyewear retailer, we find that: (1) the introduction of an offline channel increases demand overall and through the online channel as well, and (2) customers who migrate offline are those with the highest cost-to-serve both online and through other mechanisms such as product sampling. The second finding is evidenced by a decline in product returns through the online channel, and through a higher rate of conversion from sampling, and a reduction in repeated sampling by individual customers. The economic impact of more efficient matching made possible by the introduction of offline inventory display showrooms, is substantial.

3 - Controlling for Self-selection Bias in Customer Reviews

Dina Mayzlin, Professor, University of Southern California, Los Angeles, CA, United States of America, mayzlin@marshall.usc.edu, Leif Brandes, David Godes

Customers frequently use user online reviews as a valuable information resource. However, one possible criticism of online user reviews as a source of information is the self-selection inherent in the review process. That is, consumers self-select into choosing whether to review a product, which suggests that the distribution of reviews may be more polarized than the true preference distribution. We provide survey evidence that demonstrates that customers who post an online review tend to have more extreme opinions than customers who never post a review. We hypothesize that the consumers who have more extreme opinions post their reviews quicker, while the consumers with more moderate opinions may take longer to post a review, which implies that in the limit some consumers with moderate opinions may never post a review. One implication of this is that reviews that arrive after a long time lapse are more similar to the opinions of the non-responders. Hence, a firm that is able to observe the time lapse between the experience and the review should be able to calculate the valence of reviews in a way that corrects for the non-response bias. That is, we suggest how to correct for the extremity bias by taking into account the duration of response data. To test our hypotheses, we use a new dataset from a large online travel portal. Based on our empirical results, we show how customer self-selection across time impacts her review behavior and suggest a method for controlling for this bias.

4 - Should You Target Early Trend Adopters? A Field Experiment on Twitter

Anja Lambrecht, Assistant Professor, London Business School, Sussex Place, London, NW1 4SA, United Kingdom, alambrecht@london.edu, Catherine Tucker, Caroline Wiertz

Marketing has often stressed the importance of targeting firm communications to individuals who embrace and propagate trends. But little is known about how easy it is to actually persuade these early trend adopters. In this paper, we empirically measure whether targeting advertising towards early trend adopters is effective. We use data from a field experiment conducted on Twitter.com. On Twitter.com, ‘promoted tweets’ allow advertisers to target individuals who post on the micro-blogging site on a specific topic. Importantly for us, at any point in time Twitter identifies which topics are current trends. In the field experiment, we can therefore target individuals that post on a Twitter-trend on any day. We continue targeting individuals that post on the trend for three more days. We find that targeting individuals who embrace trends early on tends not to be successful, independently of whether the desired outcome is click or word-of-mouth (measured as whether they rebroadcast the ad). We suggest that this is the case because early trend adopters, more so than others, aim to make their own unguided choices and have little motivation to follow suggestions by others. In line with this interpretation, we do not find a negative effect of targeting individuals who post on sponsored trends that is individuals who demonstrate a general interest in firm-sponsored messages. Lastly, our results demonstrate an interaction between targeting and message content: early trend adopters respond even more negatively when a message is framed to be relevant in the immediate versus long-term.

■ TB03

Room E204

Cause-Related Marketing I

Contributed Session

Chair: Pamela Morrison, Professor, Australian National University, Research School of Management, Level 1, LF Crisp Bld. 26, Canberra, AC, 0200, Australia, pam.morrison@anu.edu.au

1 - Ethical Claims are Not Created Equal: The Differential Effects of Ethical Attributes Across Product Category

Omar Rodriguez-Vila, Assistant Professor of Marketing, Georgia Institute of Technology, Scheller College of Management, Atlanta, GA, United States of America, Omar.Rodriguez@scheller.gatech.edu, Sundar Bharadwaj

The inclusion of ethical claims such as environmental or community benefits as part of a product offering continue to expand across brands. However, experimental studies and some market cases suggest the value of ethical claims is not always positive, and at times, could be detrimental to the business. In this study we conduct an empirical investigation into the effect of ethical claims across 700 brands in 6 product categories in the United States. Using data from new product introductions at the SKU level, we develop a novel measure of the intensity of ethical claims by brand. We then combine the information with marketing mix variables including retail activation, pricing, distribution levels, and advertising investments over a five year period to study the effect of ethical claims on product sales performance. We propose and empirically test two hypotheses. First, that ethical claims are most effective when they address a market externality specific to the product category. Second, that the presence of ethical claims reduce the price sensitivity among established brands, but increases it among new brands entering the category. Finally, we investigate the relative effect of more traditional product changes such as packaging size or product flavor, with the effect of ethical claims to understand the opportunity costs associated with investments in ethical benefits. The results provide guidance to managers on the definition of strategies for embedding ethical claims into their product marketing efforts.

2 - The Effect of Involvement on Fundraising: A Charity Field Experiment

Peter Popkowski Leszczyc, University of Alberta, Edmonton, AB, Canada, ppopkows@ualberta.ca, Ernan Haruvy

The focus of this study is to test the effect of fundraising incentives on effort and outcomes in a fundraising drive. A unique feature of this study is that we observe effort by fundraisers in terms of activity on and input into their own personal fundraising website, quantity and quality of input, and social connections pursued. Each fundraiser is tasked with maintaining a personal website, creating content, including an essay about what the charity means to him or her and why people should donate to this charity, and establishing social connections in an effort to raise money. Incentive treatments included a control with no incentives, tournament incentives of low value, tournament incentives of high value, escalating rewards of low value, and escalating rewards of high value. We report results of a field experiment consisting of over 350 fundraisers participating in a fundraiser over a period of two months. We find that outcomes are driven by effort and that effort mediates most antecedents – including fundraisers’ prior social attitudes, risk attitudes, prior experiences, and treatment effects. Escalating rewards of both magnitudes seem the most effective in raising efforts.

3 - The Effectiveness of Cause Marketing

Michelle Andrews, PhD Candidate, Temple University, 1801 Liacouras Walk, Philadelphia, PA, United States of America, michelle.andrews@temple.edu, Zheng Fang, Xueming Luo, Jaako Aspara

Although cause-related marketing (CM) is a widely used industry practice of linking product sales with donations to charity, research has rarely quantified the sales impact of CM for firms. Based on large-scale randomized field experiments with over 17,000 consumers, the authors demonstrate that CM significantly increases consumer purchases (Study 1). Moreover, price discounts moderate the sales impact of CM in a nuanced pattern: CM effectiveness is highest with a moderate level of price discounts, rather than deep discounts or no discounts (Study 2). A subsequent lab experiment reveals a moral identity-based mechanism (Study 3). That is, decreases in CM effectiveness from moderate to deep discounts are driven by consumers with high moral identity. These findings provide new insights into the boundary conditions and moral mechanisms of the sales impact of CM for researchers and managers alike.

4 - Marketing Sustainable Outcomes: Identifying Leverage Points in the Public’s Decision Process

Pamela Morrison, Professor, Australian National University, Research School of Management, Level 1, LF Crisp Bld 26, Canberra, AC, 0200, Australia, pam.morrison@anu.edu.au, John Roberts, Charlie Nelson, Shari Read

Surveys suggest that over 95% of climate change scientists believe that serious global warming is occurring, while for members of the general public the figure hovers between 67 and 75%. For support of various climate change policies, the difference is even more marked. By administering identical surveys to members of the general public and scientists we are able to represent the decision making process of members of the general public and compare the two groups. We use Structural Equation Modeling to represent the relationship between the different constructs in the general public’s policy support decision making process; beliefs (about the degree to which climate change is occurring; the degree to which it is caused by human activity; the likely severity of outcomes; and the effectiveness, cost and feasibility of different climate change amelioration strategies) and policy support (for different policy options). Having the views of scientists as comparators, enables us to identify areas of disconnect between the views of the public and those whose profession it is to study this phenomenon. This allows us to run a simulation to test the political ramifications of marketing campaigns that might be able to change each construct to levels equal to those of the professionals; thus identifying the leverage points in the decision making process. Finally, a second wave of data on the general public’s views enables us to test the stability of our parameter estimates and trends in the levels of each construct over a two year period.

■ TB04

Room E201

Mobile Apps

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Zeynep Aydin, Rotterdam School of Management, Rotterdam, Netherlands, zaydin@rsm.nl

1 - Customer Acquisition Duration in Extremely Competitive Markets: Insights from the Mobile App Category

Ruijiao Guo, PhD Candidate, University of Wisconsin - Milwaukee, 1800 E Capitol Drive, MIlwaukee, WI, 53211-2300, United States of America, rguo@uwm.edu, Purush Papatla

Some products and services today compete against hundreds or thousands of competitors. Faced with so much competition, producers offer their products and services for free or at a very low price in the hope of attracting a large group of users who would subsequently buy more advanced and profitable versions. We label such markets as extremely competitive. Businesses competing in such markets need an understanding of how they can rapidly attract customers to eventually realize the hoped for profits. Unfortunately, the literature provides few insights regarding this issue. This is the gap that we address in this research using the mobile app category. This category is particularly apt for investigating extremely competitive markets due to the large number of apps – over a million each in the iTunes App Store and Google Play as of February 2014 – that are available. Our focus in this research is on why, in the face of such extreme competition, some apps acquire users faster than others. We investigate this question using data on the number of users acquired, and the acquisition duration, for about 6000 Apps from Google Play. We categorize the number of users acquired into ordered tiers and formulate a joint model of duration and acquisition using a hazard framework for the former and an ordinal model for the later. Our explanatory variables include price, apps' attributes such as genre, rating and file size, promotions, and the prices, attributes and promotions of competing apps. We also consider the role of the number and type of apps previously downloaded by the users. The model is calibrated within a Bayesian framework using MCMC methods. Findings for the app category as well as generalizable implications for extremely competitive markets are discussed.

2 - Information Retrieval Behavior of Barcode Scanning App Users and Consumer Search

Stephan Daurer, Ludwig-Maximilians-Universität (LMU) Munich, Geschwister-Scholl-Platz 1, Munich, 80539, Germany, daurer@daurer.net, Dominik Molitor, Martin Spann, Puneet Manchanda

The high penetration of smartphones has enabled more and more consumers to use the mobile Internet to search for product-related information. This information helps consumers in their purchase decision-making. We use a large dataset (15 million observations) from a leading European product information and barcode scanning app to provide insights into actual consumer mobile search behavior – both search within the app as well as the offline travel behavior during their search activity. We first illustrate search behavior of typical consumers in an exploratory analysis where usage patterns are presented and travel behavior is visualized. Second, we show that consumer search is not bound to store opening hours and is likely to happen to a large extent as ongoing search also during consumption or other activities. Third, we analyze factors that are related to individuals' search intensity and find that consumers' geographic mobility is positively correlated while previous search experience is negatively correlated with their search intensity. Finally, we find evidence that information choice differs by the type of the information (e.g., product information, price information and user-generated content) that is provided in the app.

3 - Timely Versus Quality Innovation: The Case of Mobile Applications on iTunes and Google Play

Yongdong Liu, University of California, Berkeley, Department of Ag Econ, Berkeley, CA, United States of America, liuyd@berkeley.edu, Denis Nekipelov, Minjung Park

iTunes and Google play are dominant platforms where users of portable electronic devices with Android and Apple operating systems can purchase and download applications for those devices. The applications ('apps') are developed and brought to the platforms by a large number of independently operating developers. It is a highly competitive dynamic marketplace where it is essential for the developers to keep innovating by both upgrading their existing apps and introducing new apps in order to generate revenues. In this paper we use a unique and comprehensive dataset containing information regarding apps on iTunes and Android platforms. Using a combination of techniques from the Computer Science literature, we were able to identify and validate the complete set of developers that operate on both platforms as well as the same apps that were introduced on both platforms. Using this matched dataset we study how the threat of competitors' entry influences the timing and quality of app entry. In particular, we nd that the threat of competitors' entry can have a sizeable negative impact on the quality of an app under development by forcing the developer to introduce the app prematurely before it has been properly tested and debugged. Our reduced form analysis demonstrates varying effects of this phenomenon depending on both the size of the developer and its competitors' and the sparcity of the product space on a given platform. Then we develop and estimate a structural strategic model of timing and quality decisions of the cross-platform app introduction. We use novel techniques from the Machine Learning literature to model the beliefs of developers in our semiparametric two-step estimator. The estimated structural model is then used to analyze the effects of various counterfactual changes, such as an increase in demand for certain app categories, transfers from the platform to the developers as well as 'A+B'-type contracts between the platform and the developers, on the resulting app quality.

4 - There's an App for That! Understanding the Drivers of Mobile Application Downloads

Zeynep Aydin, Rotterdam School of Management, Rotterdam, Netherlands, zaydin@rsm.nl, Gerrit van Bruggen, Berk Ataman

Since its emergence in 2008, the mobile application space has been growing at an astonishing rate. The growth of this market is not surprising at all, as mobile applications offer businesses, big and small, a unique opportunity to connect with the on-the-go consumers of our times. Due to the lucrative business opportunities and low barriers to entry, the mobile application space has become a complex marketplace with a significant number of players. Consequently, only a small portion of mobile applications is able to gain traction with mobile phone users. The low success rate of mobile applications coupled with the developers' insistence on submitting new applications begs the question what are the most critical drivers of mobile application downloads. To answer this question, we put together a unique data set for about 1000 randomly selected mobile applications in a wide variety of categories downloaded from Apple App Store in US, UK, and Canada. Specifically, we combine transactional and marketing data obtained from a leading mobile analytics company (e.g., number of daily downloads, in-app purchases, prices, features, rankings, updates) with publicly available data (e.g., ratings, reviews, content of updates). Investigating the evolution of various aforementioned factors in driving mobile application downloads during the first year of an application's existence allows us to add insights to the growing literature on mobile marketing and provide practical implications for mobile application developers.

■ TB05

Room E231

Internet & Interactive Marketing II

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Vibhanshu Abhishek, Carnegie Mellon University, 4800 Forbes Ave., Pittsburgh, PA, United States of America, vibs@andrew.cmu.edu

1 - High-dimensional Sparse Dynamic Factor Modeling: Measuring the Effects of Digital Media on Sales

Norris Bruce, Associate Professor, Marketing, University of Texas at Dallas, 800 West Campbell Road, Richardson, TX, 75080, United States of America, norris.bruce@utdallas,edu, Prasad Naik

To track and optimize media performance, digital advertisers can readily access thousands variables across search, display and social media channels. In this high-dimensional (HD) data, the number of marketing variables or parameters p can be much larger than the available sample size n. This large p, small n problem forces many challenges upon a full empirical analysis of digital media, and thus requires new methods. For example, to model dependencies in a modest sized problem of 2000 variables, one would need to estimate a covariance matrix of 2 million parameters (2000 x 2001 ÷ 2), a number that is likely to far exceed the number of observations available. We resolve this HD problem by introducing a set of techniques to select influential predictors, reduce data dimension and computational time, and model the dynamic effects of digital media on brand sales. In modeling the relationship among variables we use a hierarchical dynamic factor model in which the factor loadings matrix is sparse; that is, each factor is related only to a relatively small number of variables, representing a sparse, parsimonious relationship among substantive variables. Thus, from a forest of variables, we are able to extract and rank the few leaves that may influence brand building. We apply our model to analyze the effects of a time series (83 weeks) of more than 7000 social (Facebook) and display media variables on the sales of a major US brand.

2 - The Dynamics of Online Consumer's Purchase Pattern

Youngsoo Kim, Assistant Professor, Singapore Management University, 80 Stamford Road, Singapore, 178902, Singapore, yskim@smu.edu.sg, Ramayya Krishnan

We aim to understand longitudinal shopping patterns in the online market, particularly, on three measures: (1) the number of transactions; (2) product intangibility level, a measure we introduce to calibrate product-level uncertainty; and (3) product price. To do so, we build and estimate (a) hidden Markov model (HMM) and (b) trajectory model with individual-level transaction data collected from one of the premier online shopping malls (July 2002 to June 2006). In our HMM, we analyze the relationship between a set of hidden states of online consumer's purchase tendency (e.g., risk loving vs. risk averse) and buying behavior (e.g., intangibility level). We also relate the transitions between the latent states to the observed buying behavior such as the composition of individual market baskets. Trajectory analysis enables us to identify distinctive groups and articulate the shape of their trajectories (e.g., stable, rising, falling or hump-shaped) over time. Our empirical findings indicate that frequent online shoppers are likely to increase their online transactions, whereas in the case of occasional online shoppers, the number of online transactions does not vary over time. We identified four distinctive trajectories of average intangibility level and found that 88% of consumers show the purchase behavior of inertia on the dimension. Also we found that small online spenders follow a flat trajectory while big spenders follow a steep downward trajectory, in contrast to a general expectation. Theoretical and practical implications are discussed.

3 - Search Personalization

Hema Yogana, Assistant Professor, University of California-Davis, Gallagher Hall, 3204, Davis, CA, 95616, United States of America, hyoganarasimhan@ucdavis.edu

Online search or information retrieval is one of the most common activities on the web. Over 500 billion searches are made each day, and search generates over $40 billion dollars in revenues. Nevertheless, a significant portion of search sessions are not only long (consisting of repeated queries from the user), but are also unsuccessful, i.e., do not provide answers that the user was looking for. This presents challenges to search engine marketers, whose competitive edge depends on the quality of their search engine results. In this paper, we present a machine learning algorithm that improves search results through automated personalization using gradient-based ranking. We personalize results based on both short-term or `within-session' behavior, as well as long-term or `across-session' behavior of the user. We implement our algorithm on data from the premier search engine, Yandex, and show that it improves search results significantly compared to non-personalized results.

4 - Media Exposure through the Funnel: A Model of Multi-stage Attribution

Vibhanshu Abhishek, Carnegie Mellon University, 4800 Forbes Ave., Pittsburgh, PA, United States of America, vibs@andrew.cmu.edu, Peter Fader, Kartik Hosanagar

Consumers are exposed to advertisers across a number of channels. As a result, a conversion or a sale may be the result of a series of ads that were displayed to the consumer. This raises the key question of attribution: which ads get credit for a conversion and how much credit do each of these ads get? This is one of the most important questions facing the advertising industry today. Although the issue is well documented, current solutions are often simplistic, for e.g. attributing the sale to the most recent ad exposure. In this paper, we address the problem of attribution by developing a Hidden Markov Model of an individual consumer's behavior based on the concept of a conversion funnel. We apply the model to a unique data-set from the online campaign for the launch of a car. We observe that different ad formats, e.g. display and search ads, affect the consumers differently based on their state in the decision process. Display ads usually have an early impact on the consumer, moving him from a state of dormancy to a state in which he is aware of the product and even one in which the product enters his consideration set. Further, when the consumer actively interacts with these ads (e.g. by clicking on them), the likelihood of a conversion increases considerably. Finally, we show that attributing conversions based on the HMM model provides fundamentally different insights into ad effectiveness relative to the commonly used approaches for attribution.

■ TB06

Room E234

User-Generated Content II

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Mark Elsner, University of Cologne, Albertus Magnus Platz, Köln, 50923, Germany, elsner@wiso.uni-koeln.de

1 - Mining Consumer-generated Product Reviews to Automate Market Structure Analysis

Xin (Shane) Wang, PhD Student, University of Cincinnati, 437 CoB, Cincinnati, OH, 45221-0145, United States of America, wang2x5@mail.uc.edu, Feng Mai, Roger H.L. Chiang

The increasing popularity of social media has led to exponential growth in user-generated content, such as online product reviews, which could be highly beneficial for market intelligence. This source creates both a unique opportunity and notable challenges for academic researchers and marketing practitioners, due to the large volume and unstructured nature of the resulting data. This article presents an innovative method to automate market structure analyses by integrating text mining and sentiment analysis techniques to analyze the linguistic structure of review sentences. A multilevel, hierarchical structure of product attributes and consumer sentiments toward product attributes emerges from this method. This study also uses the derived consumer sentiments to assess the market structure. A prototype system supported an empirical investigation of more than 20,000 tablet reviews on Amazon.com, though the proposed method is generic and applicable to free-form reviews of any product or service category. The findings thus offer insights for ongoing marketing research efforts.

2 - Moment Marketing Opportunity: The Link between Online Sentiment and Macroeconomic Conditions

Yizao Liu, Assistant Professor, University of Connecticut, 1376 Storrs Rd., Storrs, CT, 06269, United States of America, yizao.liu@uconn.edu, Nathan Yang

Internet and social media marketing give firms the ability to insert themselves or their products into daily conversations, and an important question for these managers is when to do so. In this paper, we investigate the relationship between moments, in the form of past macroeconomic shocks, and users' propensity to post positive or negative content on the internet about commonly purchased products. Our research uses propriety data from Nielson BuzzMetrics, which contains daily measures of online sentiment for carbonated soft drink brands across multiple online social media channels, such as the number of positive, neutral, and negative online posts on any given day. A vector autoregression (VAR) model then is used to study the impact that past economic indicators have on the current valence of online sentiment. The findings provide us evidence that the proportion of negative posts increases when the economy indicators are low. In particular, the link between economic conditions and online sentiment is most pronounced and robust for Coke Diet, which suggests that digital marketing managers for this product pay particular attention to the economy when timing the promotion of their online engagement. Being aware of the underlying economic conditions then allows marketing managers to avoid social media promotion of Coke Diet on days immediately following bad economic news, as online sentiment towards this product may be especially vitriol on those days.

3 - Beyond Star Ratings – The Influence of Review Sentiment on Product Sales

Mark Elsner, University of Cologne, Albertus Magnus Platz, Köln, 50923, Germany, elsner@wiso.uni-koeln.de, Werner Reinartz, Maik Eisenbeiss

Online consumer reviews influence purchase behavior. While this connection has been well established by prior research, the main emphasis rests on star ratings. The underlying assumption is that consumers rely on the star ratings a product receives to make inferences about its quality level. However, it is likely that consumers actually read the reviews and not merely focus on the average start rating (Chevalier and Mayzlin 2006). Moreover, reviews only represent one source of information and consumers additionally rely on other types of user-generated content, e.g. blogs, as well as news content in their purchase decisions. In our study we model product sales as a function of star ratings, as well as the sentiment of reviews and a variety of other sources providing product-related information. Our data set consists of several hundred products that we observe over several months to be able to extract the incremental impact of each content source over time. The findings of our study downplay the role of star ratings, suggesting that consumers typically go beyond relying on this simple heuristic in forming purchase decisions.

■ TB08

Room E304

Pricing: Perceptions

Contributed Session

Chair: Yong Chao, University of Louisville, College of Business, Louisville, KY, 40222, United States of America, yong.chao@louisville.edu

1 - The Hedonics of Apportioning Consolidated Component Prices in Purchases Involving Trade-ins

Rahul Sett, Assistant Professor, IIM-Kozhikode and Johns Hopkins Carey Business School, Calicut, India, rahul@iimk.ac.in, Dipankar Chakravarti, Joydeep Srivastava

Price presentation affects choices and evaluations in transactions involving trade-ins. In traditional purchase transactions, consumers have access to the individual component prices. However, in transactions where consumers are presented only an equivalent net consolidated price, they have no objective assessment of the individual component prices. We propose that in such situations, consumers mentally apportion the net transaction price to the individual components based on the associated hedonics. Thus, they flexibly apportion the net price between the components so as to create a favorable construal of the transaction given prior attachments and negative emotions experienced due to associated trade-offs. We test this proposition and underlying psychological mechanisms in the context of new car purchase transactions that involve trading in an old car. Our assessment is benchmarked by conditions in which the component prices are segregated and known. We discuss the theoretical, managerial, and policy implications of our findings.

2 - When to Reward Old Customers: The Influence of Fairness Perception on Behavior-based Pricing

Seung Hwan Lee, PhD Student, Syracuse University, 315 Schaffer Avenue, Syracuse, NY, 13206, United States of America, slee33@syr.edu, Scott Fay

In this paper, the authors examine the impact of price fairness perception on a firm's optimal price discrimination strategy. We employ a dynamic game-theoretical model with two vertically-differentiated firms. In the second period, firms face new, incoming consumers in addition to consumers who purchased during the first period. The repurchase decision of past customers is influenced by price fairness perceptions. Specifically, past customers experience disutility if new customers are offered a lower price than they are. However, these customers receive a utility premium if the price to new customers exceeds the price to past customers. The size of the disutility/premium depends on magnitude of the price differences. We explore how the strength of price fairness perceptions impacts equilibrium prices and profit.

3 - Pay-What-You-Want Pricing: Can It Be Profitable?

Yong Chao, University of Louisville, College of Business, Louisville, KY, 40222, United States of America, yong.chao@louisville.edu, Jose Fernandez, Babu Nahata

Using a game theoretic framework, we show that not only can pay-whatyou-want pricing generate positive profits, but it can also be more profitable than charging a fixed price to all consumers. Further, whenever it is more profitable, it is also Pareto-improving. We derive conditions in terms of two cost parameters, namely the marginal cost of production and the psychological cost of the consumer for paying too little compared to her reference price.

■ TB09

Room E301

Competitive Marketing Strategy II

Contributed Session

Chair: Donald Lehmann, Professor, Columbia University, 507 Uris Hall, New York, NY, 10027, United States of America, drl2@columbia.edu

1 - Competitive Reaction Volatility and Profit Persistence

Jimi Park, Doctoral Student, Korea University, Korea University Business School, A423, Seoul, 136-701, Korea, Republic of, jimipk@korea.ac.kr, Shijin Yoo

Although competition keeps the firm from enjoying abnormal profit in the long run, we often observe that some firms show stronger profit persistence than others. We ask why profit persistence differs across firms and claim that competitive reaction volatility (CRV) is one of the missing drivers that make this difference. We examine this contention with a broad sample of firms drawn from the KISVALUE database compiled in Korea between 2000 and 2009. The firm's profit persistence based on an auto-regressive model was found to be significantly related to the magnitude of CRV measured with rolling window time series technique. Our results show that firms with a higher degree of CRV sustain superior profit longer and recover from the subnormal profit faster. In other words, if a firm unpredictably change the types of competitive reaction (e.g., accommodation versus retaliation) over time, its superior (subnormal) profit tends to converge more slowly (quickly) toward a long-term mean level than firms with consistent competitive reaction patterns do. The unpredictable competitive movement, i.e., high CRV, may cause a delay in competitive response which consequently brings superior performance and deter the new entrants. As CRV increases, rivals cannot promptly react to competitive attacks by the routine and familiar problem-solving mechanism. Firms facing high CRV from the rivalry also hesitate to react because they have a difficulty to establish a link between their reaction and the expected payoff. Our results suggest that firms better not employ a consistent and predictable competitive reaction, but rather swing between the different CR types to prolong the superior profit and/or to make a speedy recovery from the subnormal one.

2 - Product Variety as a Preemptive and Defensive Response to Entry

Sungtak Hong, PhD Candidate, London Business School, Regent's Park, London, NW14SA, United Kingdom, shong@london.edu

Despite rich theory, the empirical research on how incumbent firms' product offerings vary with respect to local market competition has been limited. A major empirical challenge comes from a lack of joint variations of factors affecting each other and exogenous variables to account for the simultaneity. To overcome this challenge, we exploit data from the Korean Soju industry after market deregulation. This market, previously composed of independent geographic markets, each with a strong incumbent producer, became open to nation-wide competition as a result of a change in government policy. Another feature of the policy was that the restriction on the use of a critical ingredient was relaxed roughly at the same time while pricing was partially restricted by law. This resulted in product proliferation after market deregulation instead of price competition. We develop a system of simultaneous equations to test hypotheses derived from previous pairwise findings around market entry, incumbent firms' product variety and market power. Market power (i.e., share) is instrumented by a trade margin given the regulated manufacturer price, while the number of firms is instrumented by various regional demographics and location variables as appeared in entry models. Product variety is also separately instrumented by regional and industry characteristics. The identified mechanism suggests that product proliferation can deter entry only if there is strong demand for variety. In addition, new entry induces an incumbent firm to offer more variety to maintain its position but it may suppress the variety when the entrants steal substantial shares. We also find that the impact of market power on the variety depends on the level of entry barrier.

3 - An Inter-product Competition Model Incorporating Branding Hierarchy and Product Similarities Using Store Level Data

Praveen Kopalle, Professor of Marketing, Dartmouth College, 100 Tuck Hall, Hanover, NH, 03755, United States of America, kopalle@dartmouth.edu, Sudhir Voleti, Pulak Ghosh

We develop and implement a Bayesian Semi-parametric model of demand under inter-product competition that enables us to assess the respective contributions of brand-SKU hierarchy and inter-product similarity to explaining and predicting demand. To incorporate brand-SKU hierarchy effects, we use Bayesian hierarchical clustering inherent in a nested Dirichlet process to simultaneously partition brands, and SKUs conditional on brands, into groups of 'similarity clusters'. We examine cluster memberships and post-process the MCMC output to infer cluster properties by accounting for parameter uncertainty. Our proposed approach lends to a spatial competition interpretation in latent attribute space and helps uncover the extent to which competition across SKUs in the latent attribute space is local or global. In a related vein, we discuss the implications of well-defined groups of similar SKUs as sub-category or sub-market boundaries in latent attribute space. We empirically test our model using aggregate beer category sales data from a mid-size US retail chain. We find that branding hierarchy effects dominate those from product similarity. We find that the model partitions the 15 brands in the data into 4 brand clusters and the 96 SKUs into 25 SKU clusters conditional on brand cluster membership. In estimating a set of models of spatial inter-product competition, we find that SKU competition is more local than global in that only subsets of products compete within groups of comparable products. Finally, we discuss the substantive implications of our results.

4 - The Impact of Competition, Brand Equity, and the Cost of Overstating Quality on Advertised Quality, Quality and Price

Donald Lehmann, Professor, Columbia University, 507 Uris Hall, New York, NY, 10027, United States of America, drl2@columbia.edu, Praveen Kopalle

This paper examines the impact of competition, brand equity, and the cost of overstating quality on optimal quality and quality claims. We consider two firms simultaneously introducing a new product and making one-time decisions about the product quality, price, and advertised quality. Using a two period model which allows for larger weight on future period sales, we find competition leads to overstating quality unless constrained by high legal costs. More interesting, when competitors are constrained to be truthful in their advertising due to legal or other costs, optimal product quality, and hence potentially consumer welfare, is lower. To evaluate the extent to which managers would behave in line with model prescriptions in different competitive and legal cost contexts, we conducted a conjoint study. In the main, managerial intuition is directionally consistent with the model results. We also find the model assumptions and results are consistent with data from the U.S. Federal Trade Commission (FTC) on deceptive advertising cases decided between August 1996 and December 2002.

■ TB10

Room E331

Pricing: Dynamics I

Contributed Session

Chair: Hernan Bruno, INSEAD, Boulevard de Constance, Fontainebleau, France, Hernan.BRUNO@insead.edu

1 - An Empirical Investigation of Price Markdown Policies for Fashion Goods

Aidin Namin, PhD Student, University of Texas-Dallas, 800 W Campbell Rd., SM 32, Richardson, TX, 75080, United States of America, aidin.namin@utdallas.edu

We use a finite mixture model to estimate sales for seasonal goods. Sales estimations are used to find the optimal pricing policy; (1) timing and (2) depth of markdowns, at each time period for the fashion product. We use a mixture of normal distributions with different means for each latent class of coats to model heterogeneity in estimating number of items sold under different markdown policies. The sales model identifies and accounts for latent classes of coats in the data using a generalized linear latent and mixed model. Class-specific estimations of the sales equation were used as an input to a dynamic programming problem to solve the pricing problem by maximizing revenue for a fashion retailer by using Bellman principle of optimality. We find the optimal timing and depth of markdowns in a discrete time setting by solving the dynamic programming. We further investigate the dynamic programming solution to find policy recommendations based on the important factors that can impact a fashion retailer's revenue. We use a two-year panel dataset from a leading US fashion retailer. Our sales estimation model shows the distribution of heterogeneity to have two peaks in our data, with two latent classes.

2 - The Impact of Customers' Feeling of Betrayal on the Profitability of Targeted Promotions

Minoo Talebi Ashoori, PhD Candidate, University of Central Florida, 2011 Puritan Road, Orlando, FL, 32807, United States of America, mtalebi@ucf.edu, Axel Stock

Many companies charge lower than regular prices to potential customers to increase sales. With the prevalence of social media and the internet, information about such targeted promotions is readily available to consumers often leading to feelings of betrayal among loyal customers. Companies are thus increasingly concerned about the effect of negative post-purchase reactions to targeted promotions on their profitability. In this paper, we utilize a two-period game theoretic model to examine the impact of customers' feelings of betrayal due to perceived price unfairness on a company's pricing strategy and profits. We show that a monopolist's profit decreases as customers' sensitivity to betrayal increases, and that this negative effect is greater for a high quality provider. Furthermore, our analysis of a horizontally differentiated market reveals that although the betrayal effect changes the pricing of the companies it does not change their profits because a company can compensate the loss of loyal customers by attracting an equal number of switchers from its competitor. Moreover, in our analysis of a vertically differentiated market we find that the low quality provider's profits always decrease with customers' sensitivity to betrayal. In contrast, we show that interestingly a high quality provider's profits may increase with customers' sensitivity to betrayal as long as the quality difference between companies is not too large. Under this condition, the high quality provider's profits increases sufficiently in the first period because of its better ability to price discriminate which compensates for the resulting greater loss from betrayal in the second period.

3 - Behavior-based Pricing: An Analysis of the Impact of Peer-induced Fairness

Jiaoyang Krista Li, Texas A&M University, Mays Business School, College Station, TX, 77845, United States of America, kli@mays.tamu.edu, Sanjay Jain

Firms tracking consumer purchase information often conduct behavior-based pricing (BBP), i.e., price discriminate between consumers based on preferences revealed from purchase histories. However, behavioral research has shown that such pricing practices can lead to perceptions of unfairness when some consumers are charged a higher price than other consumers. This paper studies how firms adjust their pricing strategy in response to consumers' fairness concerns. We also investigate the impact of consumers' fairness concerns on firms' profits, consumer surplus, and social welfare. Prior research on BBP finds that BBP often yields lower profits than without consumer recognition or behavior-based price discrimination. We find that consumers' fairness concerns can mitigate this negative effect of price discrimination on the profits of a monopolist. Interestingly, we find that in a duopoly, BBP can be more profitable than pricing without consumer recognition. These findings add new insights to the BBP literature and provide a theoretical justification for the growing adoption of BBP by online and offline firms in various industries. Furthermore, consumers' fairness concerns reduce inefficient switching, improving social welfare when consumers are sufficiently concerned about fairness. However, consumers' fairness concerns decrease consumer surplus.

4 - A Dynamic Model of Pricing and Salesforce-driven Customer Management

Hernan Bruno, INSEAD, Boulevard de Constance, Fontainebleau, France, Hernan.Bruno@insead.edu, Shantanu Dutta, Yanwei Zhang

Most transactions in B2B markets are mediated by a salesforce who often has some degree of authority to set the price of the product. In this paper we use a dynamic hierarchical model to show that the price a salesperson charges to a customer has a lasting effect on the customer's transactional behavior. The model is estimated using MCMC in a bayesian setting and we use a copula approach to account for the potential price endogeneity. Our model shows that higher prices result in lower amounts of quantity purchased and longer inter-purchase times. These effects are moderated by the frequency of interactions between the salesperson and the customer, the salesperson intrinsic selling characteristics and the portfolio of products the customer buys from the company. Our results provide a way to measure salespeople's selling performance in terms of the long-term profitability of the customer relationships that they have, not just on the profitability of their sales in the medium term.

■ TB11

Room E334

Multichannel Marketing

Contributed Session

Chair: Murali K. Mantrala, Sam M. Walton Distinguished Professor of Marketing, University of Missouri, 403 Cornell Hall, Columbia, MO, 65211, United States of America, mantralam@missouri.edu

1 - Asymmetric Sales Response to Price Promotion

Sadat Reza, Assistant Professor, Nanyang Technological University, 50 Nanyang Avenue, S3-B1-12, Singapore, 639798, Singapore, sreza@ntu.edu.sg

We conduct a multi-country multi-category analysis to investigate how effectiveness of price-promotion varies depending on the intensity of price promotion among the retailers. In most countries, hypermarkets, supermarkets and convenience stores often co-exist in the same area offering similar range of product categories. For any category, the price-points across various retail-store formats often vary substantially. However, given geographical proximity price promotions in one retail-format may attract customers away from other retail-formats, at least temporarily. We conjecture that in regions where such activity is a relatively common phenomenon, the ability to draw customers from other retail formats is more challenging. Empirical investigation of such phenomenon is complicated by the fact that price promotions may occur at various retail-formats simultaneously. We apply a spatial-Durbin model that allows us to model the simultaneity in response variables of spatially connected agents. We extend the model to incorporate multiple spatially connected groups to identify the asymmetric effects of price promotion on sales. We calibrate our model on panel retail audit data sets from New Zealand, Singapore and Thailand on carbonated soft-drinks and detergent categories to highlight the sources of such asymmetric responses on sales.

2 - Product Assortment Strategies for a Multi-channel Retailer

Yongbum Choi, Syracuse University, 721 University Ave., Syracuse, NY, 13244, United States of America, ychoi26@syr.edu, Eunkyu Lee

As an increasing number of retailers engage in the practice of multi-channel distribution, a retailer's coordinated product assortment decision between its online and offline retail outlets has become a significant managerial problem that begs for more research. In this study, we develop and analyze a game-theoretic model of a multi-channel retailer within a decentralized or a vertically integrated structure. By comparing four possible product assortment strategies (1) separate, 2) online-exclusive, 3) offline-exclusive, and 4) common product lines), we analyze the economic incentives and the underlying strategic forces that shape the retailer's strategic choice and the resulting prices, quantities, and channel power balance. The equilibrium solutions indicate that the online exclusive assortment strategy can be an efficient alternative to the common assortment strategy when the consumers have a low level of Internet channel disutility. When using the online exclusive assortment strategy, the retailer finds it optimal to charge the lowest price for the exclusively offered product while the product commonly available on both channels is priced higher in the online store than in the offline store. We also find an interesting interaction effect of product assortment strategy, degree of product differentiation, and consumers' Internet channel disutility on the power balance between the manufacturer and the retailer in a decentralized channel. These results reflect the multi-channel retailer's attempt to seek the optimal balance of market coverage, price discrimination, and channel power effects.

3 - Restocking Fee as a Tool of Channel Coordination

Tieshan Li, Concordia University, 1450Guy Street, Montreal, QC, Canada, tieshli@jmsb.concordia.ca

Traditional channel structure can result in double marginalization, which hurts channel performance. With widely adoption of multi-channel by manufacturer, channel structure becomes more complicated and channel conflicts get even worse. Among the solutions to mitigate channel conflict in marketing literature, this research investigates the role of restocking fee in coordinating channel members. In a market with a manufacturer selling identical product through both retailer and her direct channel, consumers can get different utility due to the uncertainty of product match from direct channel. In a theoretical approach, we find the strategic role of restocking fee. By imposing restocking fee strategically, manufacturer will lower the wholesale price to retailer. The retailer will respond by decreasing the retail price. The actions of manufacturer and retailer can lead to build more demand in the market. As a result, total channel profit gets improved. This research makes contribution in channel literature by understanding the strategic role of restocking fee in multi-channel coordination.

4 - The Impact of Retail Store Format on the Shopper Satisfaction-loyalty Relationship

Murali K. Mantrala, Sam M. Walton Distinguished Professor of Marketing, University of Missouri, 403 Cornell Hall, Columbia, MO, 65211, United States of America, mantralam@missouri.edu, Alicia Izquierdo-Yusta, Maria Pilar Martinez-Ruiz, Omid Kamran-Disfani

Today, in the face of 'channel blurring', an increasing number of retailers are selling their wares through multiple formats in an attempt to reach and retain different shopper segments. However, most retailers are unsure whether and how the drivers of shopper loyalty (attitudinal and behavioral) might vary across retail formats. Improving current understanding of these questions is important for retailers aiming to boost shopper loyalty and, ultimately, store profitability. In the past, many companies heavily invested in increasing customer satisfaction in the hope of increasing loyalty but recent research has revealed that the satisfaction-loyalty relationship tends to be weak, albeit positive. Moreover, a great deal of variance in loyalty is explained by mediators such as 'trust.' However, whether and how the mediating role of trust varies by store format are questions that have not been systematically explored to date. In this research, therefore, the authors examine how changing format, specifically, supermarkets versus hypermarket, impacts the proposed links between satisfaction, trust, attitudinal and behavioral loyalty, in a conceptual model derived from past research. Using data from over 500 surveys of Spanish shoppers at hypermarkets and supermarkets, we test the proposed model on the overall sample as well as the hypermarket and supermarket subsamples. The results reveal that the satisfaction-loyalty relationship changes upon shifting from supermarkets to hypermarkets. Specifically, trust plays a crucial mediating role in the case of supermarkets but not in hypermarkets. We discuss the implications of these results for retailers' strategies for boosting shoppers' attitudinal and behavioral loyalty.

■ TB12

Room W300

Customer Satisfaction II

Contributed Session

Chair: Yu-Li Lin, Assistant Professor, Southern Taiwan University of Science and Technology, No. 1, Nan-Tai Street, Yungkang Dist., Tainan, 702, Taiwan - ROC, bookigen@gmail.com

1 - Managing Customer Satisfaction Paradox – An Industrial Case

Meng-Ting Chen, Graduate Students, National Chung Hsing University, Dept. of Marketing, No.250, Guoguang Rd., Taichung City, 402, Taiwan - ROC, dream4179@hotmail.com, Shiau-Chi Lin, Ming-Chih Tsai

Customer satisfaction does necessarily indicate customer loyalty. The phenomenon is called satisfaction paradox and may lead to waste of marketing resources. In addition to customer characteristics, research indicates that satisfaction paradox may be also moderately by marketplace, mainly competitor effect and vendor's relational actions. However, a holistic assessment and management for customer satisfaction paradox is still lacking and operational model is absent from extant studies. As a result, this study aims to develop a systematic approach to manage customer satisfaction paradox in a logical manner. Based on risk management approach, we first identify the risk events and categorize the customers by customer satisfaction and switching behaviors to identify the customers and the competitor effects. Second we evaluate the customer groups by transactional volume to illustrate the risk impact. Third, we investigate the effect of vendor's relational measures and prioritize and identify customers with associated relational measures to mitigate the risk impact. For demonstration purpose, we use high-tech customers with global express delivery as a study case. Samples of 110 high-tech firms with experiences of using the three main global express carriers are collected. 5 by 5 qualitative risk matrix is developed as indicators to assess and control the risk. Statistical clustering and ANOVA are used to group and identify the customers. Finally, results and managerial implications are discussed to illustrate the contributions of the research design.

2 - Modeling Determinants of the Satisfaction-loyalty Relationship: Theoretical and Empirical Evidence

Younghan Bae, Assistant Professor of Marketing, Pennsylvania State University Greater Allegheny, 4000 University Drive, Frable 217, McKeesport, PA, 15132, United States of America, yzb1@psu.edu, Gary Russell, Lopo Rego

Customer satisfaction and loyalty are central constructs in marketing research and practice because they are important determinants of firms' current and future product-marketplace and financial performance. In this research, we develop a comprehensive theoretical framework that simultaneously incorporates heterogeneity in customer, firm and industry characteristics. We test our theoretical framework by estimating a 3-level Hierarchical Linear Model (HLM), using American Customer Satisfaction Index (ACSI) data. Our findings indicate that the true nature of the satisfaction-loyalty link is significantly influenced by competitive setting differences. Accounting for such differences allows firms and managers to significantly increase their ability to effectively convert satisfaction investments into loyalty. Additionally, we identify important trade-offs between the intercept and slope of the association between the two metrics, indicating that firms' incentives to invest in satisfaction differ dramatically across industries. Because firms can obtain a certain level of loyalty by indirectly choosing how much to invest in satisfaction, satisfaction must be treated as an endogenous variable. In a subsequent analysis, we control for both satisfaction endogeneity and competitive settings heterogeneity using a Two-Stage Least Squares (2SLS) 3-level HLM. Our findings provide theoretical and managerial insights into the satisfaction-loyalty relationship.

3 - Dual-objective Incentives and Marketing Employee Performance: Evidence from Lab and Field Experiment

Chanho Song, Kent State University, 800 E Summit St, Kent, OH, 44240, United States of America, csong4@kent.edu, Sung Ham

Service employees are commonly incentivized on both quantity and quality performance (i.e. dual-objectives). However, much of the marketing literature deals with incentive programs for singular objectives. We examine the importance of designing incentives for dual-objectives using both an experimental economics laboratory experiment and field experiments. In particular, we test the dual-objective agency theory (Holmstrom and Milgrom 1991) which proposes that employees make substantial tradeoffs between objectives when the incentives for the objectives are changed. Across the experiments, we find ample support for the dual-objective agency theory and additionally, find that employees readily encounter a maximum effort resource constraint when the provided incentives are sufficiently strong. Our results demonstrate the importance of designing incentive programs that factor in the potential tradeoffs made by marketing employees when tasked with dual, rather than singular, objectives.

4 - Effects of Customer-to-Customer Interaction and Customer Satisfaction

Yu-Li Lin, Assistant Professor, Southern Taiwan University of Science and Technology, No. 1, Nan-Tai Street, Yungkang Dist., Tainan, 702, Taiwan - ROC, bookigen@gmail.com, Hsiu-Wen Liu

The main purpose of this study is to explore the effects of customer to customer interaction on customer satisfaction. The mediating effects of perceptions of fellow customers and customer role conflicts are also developed. By empirical analysis, some important results are obtained: 1.While customers have more interaction from customer was more customer satisfaction. 2. When a perception of fellow customers and customer role conflicts is closer, customers have more customer satisfaction. 3. The customer to customer interaction on customer satisfaction not only should strengthen, but also improve perception of fellow customers and customer role conflicts, through the mediating effects of satisfaction. The implications of these findings will discuss and the limitations of the study as well as future research directions will address.

■ TB13

Room W330

Marketing and Financial Performance

Cluster: Special Sessions

Invited Session

Chair: Meike Eilert, University of Nebraska-Lincoln, Lincoln, NE, United States of America, meike.eilert@unl.edu

Co-Chair: Niket Jindal, University of Texas at Austin, Austin, TX, United States of America, niket.jindal@phd.mccombs.utexas.edu

1 - Brands and Firm Performance

Meike Eilert, University of Nebraska-Lincoln, Lincoln, NE, United States of America, meike.eilert@unl.edu, Satish Jayachandran

Building brands is imperative to marketing and given the importance of this topic to managers, researchers in the past two decades have examined the link between brands and firm performance more closely. While the general consensus from previous research appears to be that brands indeed create firm value, it is unclear 1) whether all brand equity metrics are equally likely to be associated with superior performance and 2) whether all performance metrics are equally likely to reflect brand equity. We address this gap in the literature using a meta-analysis of 38 studies and 312 effects. Our findings show that while brand equity metrics are positively associated with performance in general, there is significant variation in the type of brand equity and performance metric being used. Brand attitudes and attachment is more strongly associated with firm performance than other metrics, such as those reflecting brand awareness, association, and action. Moreover, we find that while stock market-metrics are more likely to capture the value of brand equity than accounting-based metrics, there are certain accounting-based metrics for which the reported a brand equity – performance relationship is comparable to that of stock market-based metrics.

2 - Myopic Marketing Management: Antecedents and Consequences

Atanas Nik Nikolov, University of Georgia, Athens, GA, United States of America, nikolov@uga.edu, Sundar Bharadwaj

Our understanding of myopic marketing management is yet to reflect the moderating influences of firm governance and investor base considerations. We propose that the negative implications of myopic marketing for firm performance also depend on 1) institutional investors' investment horizons, and 2) CEO executive compensation structure. In this large sample study we measure the impact of these two factors on 1) the extent of myopic marketing management, and 2) the relationship between myopic marketing and firm performance both in the short and long term. Our findings suggest that long-term investor horizons and long term oriented CEO compensation mitigate the odds that a firm would engage in the practice of myopic marketing management by cutting its marketing and R&D investments. Furthermore, long-term investor presence is associated with a decrease in firm performance when the firm engages in myopic marketing management, suggesting that investor horizons of institutional investors impact the stock market performance of firms practicing myopic marketing management.

3 - Should Firms Pursue an Offensive or Defensive Marketing Strategy During Times of Low Consumer Confidence?

Eelco Kappe, Pennsylvania State University, Philadelphia, PA, United States of America, erk11@psu.edu, Frank Germann, Rajdeep Grewal

Firms employ some combination of offensive and defensive marketing strategy. Offensive strategy aims at acquiring new customers whereas defensive strategy is geared toward minimizing customer turnover. In this paper, we seek to examine which strategy, offensive or defensive, firms should pursue during periods of low consumer confidence. On the one hand, extant literature on marketing during recessions suggests that firms might benefit from an offensive strategy, i.e., an increase in advertising and promotional spending during times of low consumer confidence. On the other hand, customers are known to defect at an increased rate during periods of low consumer confidence. Hence it becomes important to stay close to the customers when consumer confidence is low, suggesting a defensive strategy during times of low consumer confidence. Using panel data on US-based manufacturing and service firms, we employ a dynamic panel model to test our hypotheses on which firms benefit from either or both of the strategies during times of low consumer confidence.

4 - The Impacts of Advertising Assets and R&D Assets on Reducing Bankruptcy Risk

Niket Jindal, University of Texas at Austin, Austin, TX, United States of America, niket.jindal@phd.mccombs.utexas.edu, Leigh McAlister

Research has shown that advertising assets and R&D assets increase shareholder value. While one might conclude that their impacts on bankruptcy risk are merely the inverse of their impacts on shareholder value, we argue otherwise and show that the differences hinge on the fact that shareholder value is a function of expected cash flows from all future periods whereas bankruptcy risk is a function of expected cash flow from only the next period. We show that current market turbulence moderates the impacts of advertising assets and R&D assets on expected cash flow from the next period, but not on expected cash flows from more distant future periods. Therefore, market turbulence moderates the impacts of advertising assets and R&D assets on bankruptcy risk but not shareholder value. Market stability increases the impact of advertising assets on reducing bankruptcy risk; whereas market turbulence increases the impact of R&D assets on reducing bankruptcy risk. Using a dataset of over 1000 firms covering three decades, we find support for our hypotheses and out-of-sample validation indicates that bankruptcy prediction performance improves by including marketing variables in addition to the usual financial predictors.

■ TB14

Room W100

Advances in Choice Modeling II

Contributed Session

Chair: Kee Yeun Lee, Assistant Professor, Hong Kong Polytechnic University, 8/F Li Ka Shing Tower, MM Dept, Kowloon, Hong Kong - PRC, keeyeun.lee@polyu.edu.hk

1 - Data Diet: Modeling Customer Memory in Probabilistic Choice Models

Daniel McCarthy, Doctoral Candidate, Univeristy of Pennsylvania, Wharton School Statistics Dept, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, danielmc@wharton.upenn.edu, Shane Jensen, Peter Fader, Daniel Zantedeschi

How much data do we need for effective customer targeting and scoring? Behavioral theory suggests that customers learn and forget in a dynamic fashion; the value of information is not necessarily increasing in the amount of data collected. We propose a novel, statistically principled way of allowing for non-stationarity in traditional probabilistic choice models by modeling the rate of customer forgetting. Our approach is analogous to a local level state space model for each customer for the parameters of interest. Our approach hierarchically models all parameters of interest, enabling full sharing of information across customers for all parameters. This model extends upon a methodology which has recently shown improved performance in forecasting settings. We conclude with a discussion of the managerial implications of the model. We identify three primary managerial consequences of this model for firms (1) it allows firms to streamline their data management processes at a minimal cost to modeling accuracy; (2) it improves firms' ability to identify their most valuable customers; and (3) it can give firms estimates of customer preferences that are up to date, helping companies respond or adapt to those changing customer preferences.

2 - Bayesian D-optimal Choice Designs for Mixtures

Aiste Ruseckaite, PhD Candidate, Erasmus University, P.O. Box 1738, Rotterdam, 3000 DR, Netherlands, ruseckaite@ese.eur.nl, Dennis Fok, Peter Goos

Consumer products and services often concern mixtures of ingredients. Examples are the ingredient proportions in a cocktail or the different components of waiting time, in-vehicle, and out-of-vehicle travel time in a transportation setting. Choice-based conjoint studies on the data obtained from an experimental design can help determine what combination of attributes best fits consumers' preferences. In most choice experiments, individuals face sets of hypothetical products and are asked to indicate the most preferred one in each set. There are currently no studies on the optimal design of choice experiments involving mixtures. We propose a method for generating optimal designs for such experiments. To this end, we first introduce (ingredient) mixture models in the choice context and next present an algorithm to construct D-optimal experimental designs assuming the multinomial logit model is used to link preferences to actual choices. A complication in constructing such designs is that the Doptimality criterion depends on the parameter values that are unknown prior to analysis. We overcome this issue by adopting a Bayesian approach. In this case, we explicitly incorporate uncertainty that exists about the parameters before performing the study. This uncertainty is captured in a prior distribution. We show that our method outperforms other, more naÔve, ways of constructing experimental designs. With a fixed sample size, our design would lead to more precise estimates of preference parameters, or fixing the precision, our design allows one to reduce experimental costs by reducing the sample size.

3 - Modeling Consumers' Selective Attribute Evaluation in SKU Choice: A Group Lasso Approach

Yanwei Zhang, University of Southern California, 3660 Trousdale Parkway, ACC 306E, Los Angeles, CA, United States of America, yanweizh@usc.edu, Sivaramakrishna Siddarth

A large stream of experimental and econometric research has found that consumers' limited information processing capacity leads them to not consider all attributes of a product in making choice decisions. Such attribute restriction may be particularly significant when consumers choose SKUs from product categories characterized by a very large number of alternatives. We propose a new latent class multinomial logit model that uses the group Lasso approach to identify the attributes that are salient in the SKU choice decision. Our method is fast and scalable, and extends naturally to cases with large numbers of attributes and alternatives. An empirical application to a scanner panel dataset shows that the proposed model fits the data significantly better than a latent class choice model that assumes all attributes are relevant to all consumers. The model also yields more accurate share forecasts for brand new SKUs launched in a later time period. Further, we show that our attribute selection approach yields better forecasts of consumers' purchase incidence decisions. Managerial implications of our findings for manufacturers and retailers are discussed.

4 - A Two-stage Mate Choice Model with Potentially Non-compensatory Decision Rules

Kee Yeun Lee, Assistant Professor, Hong Kong Polytechnic University, 8/F Li Ka Shing Tower, MM Dept, Kowloon, Hong Kong - PRC, keeyeun.lee@polyu.edu.hk, Elizabeth Bruch, Fred Feinberg

In this research, we develop a two-stage mate choice model and estimate it using data from an online dating service provider in the US. The proposed model captures the intrinsically multistage behavior involved in many online transactions, but in particular dating, where one decides which profiles to browse and then, conditional on having browsed, whom to write to, if anyone. It also allows us to empirically evaluate decision rules that differ from the usual linear-compensatory framework underlying prior research. Here, we account for these two distinct activities by modeling two specific binary decisions: browsing and/or writing to a specific (opposite gender) individual. The model can accommodate compensatory and non-compensatory decision rules in each stage; it allows decision rules to differ across stages; different attributes can be modeled as having distinctly different utility 'shapes'; and heterogeneity in rule use across site users provides interpretable profiles of different types of mate-seeking behavior. Finally, and most importantly, we directly model the utility functions of attributes to identify and compare attribute-level decision rules ("deal-breakers" and "deal-makers") over the two stages.

■ TB15

Room W130

Consumer Behavior: Preferences I

Contributed Session

Chair: Faryal Salman, Assistant Professor, SZABIST, 90 Clifton, Karachi, Pakistan, faryal.salman@szabist.edu.pk

1 - Power and Fairness

Paola Mallucci, University of Wisconsin Madison, 4261 Grainger Hall, 975 University Avenue, Madison, WI, 53706, United States of America, pmallucci@bus.wisc.edu, Tony Haitao Cui, Diana Wu

Understanding what is fair is central to research on fairness. While different principles have been proposed, such principles do not consider an important characteristic of social interaction: power. Using a modified ultimatum game, we manipulate the power of the responder to reject the proposer's offer. Additionally, we manipulate subjects' control over power and individual contribution. We find that power and control are both important in determining the fairness of an outcome.

2 - Consumer Privacy: A Sheep in Wolf's Clothing?

Mona Sinha, Assistant Professor of Marketing, Southern Polytechnic State University, 1100 South Marietta Parkway, Business Adminstration Department, Marietta, GA, 30060, United States of America, msinha@spsu.edu

Consumer privacy concerns are at an all-time high in the U.S even though firms spend billions of dollars in data security. Consumers fear not just hackers or unknown companies, but often the very firms they do business with. The 2012 White House Bill of Rights is a harbinger of increased privacy legislation with financial and strategic ramifications that may endanger corporate America's self-regulatory model of privacy protection. Privacy research has predominantly focused on factors that impact consumers' willingness to disclose information. Some recent research addresses the privacy paradox whereby consumers' express strong privacy concerns, while also behaving to the contrary such as by adopting technology and communication tools such as social media that compromise privacy. We explore a critical but unexamined aspect of privacy, with the following research questions: (1) Are consumers' attitudes and beliefs based on their own experiences or are vicarious, derived from word of mouth and/or media, (2) Whether this has any impact on consumers' privacy protection needs and related behavior. Using a critical incident technique we compare four groups of consumers (n=1000) based on their descriptions of a salient positive or negative privacy related experience, either their own or a vicarious one. Our findings, when viewed from a social justice framework perspective, sheds light on the privacy paradox, and also highlights the impact of media and society on privacy perceptions. With billions of dollars, scores of customer relationships, and our privacy laws at stake, this research has great corporate, academic, legal, and societal significance.

3 - Investigating the Relationship Between Power Distance and Conspicuous Goods Consumption in Pakistan

Faryal Salman, Assistant Professor, SZABIST, 90 Clifton, Karachi, Pakistan, faryal.salman@szabist.edu.pk, Farah Naz

The primary objectives of this paper is to examine the relationship between power distance; a cultural dimension adopted from Hofstede's study and consumer behavior towards conspicuous good. The product category for luxury goods is high ended prestigious mobile phones. This relationship is examined through the need for uniqueness, materialism, consumer's exhibit of status seeking behavior and functionality/utility.

■ TB16

Room W320

New Methods for Marketing Data

Contributed Session

Chair: K Sudhir, Yale School of Management, 135 Prospect Street, New Haven, CT, United States of America, k.sudhir@yale.edu

1 - Scalable Rejection Sampling for Bayesian Hierarchical Models

Michael Braun, SMU Cox School of Business, 6212 Bishop Blvd., Fincher 309, Dallas, TX, 75275, United States of America, braunm@smu.edu, Paul Damien

We develop a new method to sample from posterior distributions in Bayesian hierarchical models, as commonly used in marketing research, without using Markov chain Monte Carlo. This method, which is a variant of rejection sampling ideas, is generally applicable to high-dimensional models involving large data sets. Samples are independent, so they can be collected in parallel, and we do not need to be concerned with issues like chain convergence and autocorrelation. The method is scalable under the assumption that heterogeneous units are conditionally independent, and it can also be used to compute marginal likelihoods.

2 - Exploiting the Choice - Consumption Mismatch: A New Approach to Disentangle State Dependence and Heterogeneity

Nathan Yang, Yale University, Yale School of Management, 165 Whitney Avenue, New Haven, CT, United States of America, nathan.yang@yale.edu, K Sudhir

This paper offers a new identification strategy for disentangling structural state dependence from unobserved heterogeneity in preferences. Our strategy exploits market environments where there is a choice-consumption mismatch. We first demonstrate the effectiveness of our identification strategy in obtaining unbiased state dependence estimates via Monte Carlo analysis and highlight its superiority relative to the extant choice-set variation based approach. In an empirical application that uses data of repeat transactions from the car rental industry, we find evidence of structural state dependence, but show that state dependence effects may be overstated without exploiting the choice-consumption mismatches that materialize through free upgrades.

■ TB17

Room W525

Meet the Editors I

Cluster: Special Sessions

Invited Session

Chair: Doug Bowman, Emory University, Atlanta, GA, United States of America, doug.bowman@emory.edu

1 - Meet the Editors I

Editors (or their representatives) from a number of major research journals in marketing will be available to answer questions about submitting papers and the review process. The journals expected to participate include Customer Needs and Solutions; International Journal of Research in Marketing; Journal of Consumer Research; Journal of Marketing; Journal of Marketing Research' Journal of Retailing; Journal of Service Research; Management Science; Marketing Letters; Marketing Science; Quantitative Marketing and Economics. Each participating will be part of one of the two Meet the Editors sessions: Thursday, June 10 10:30am-noon; Friday, June 11, 10:30am-noon.

Thursday, 1:30pm - 3:00pm

■ TC01

Room E130 (Aud.)

The Future of Quantitative Marketing – Highlights from the CNS Special Issues

Cluster: Special Sessions

Invited Session

Chair: Olivier Toubia, Columbia University, Columbia Business School, New York, NY, United States of America, ot2107@columbia.edu

1 - The Genesis of Marketing Research

Radoslaw Karpienko, Vienna University of Economics and Business, Vienna, 1020, Austria, Radoslaw.Karpienko@wu.ac.at, Thomas Reutterer

Marketing is a dynamic field with a growing number of research topics, authors, and journals. As publishing in leading academic journals continues to be of primary importance for marketing scholars (Seggie & Griffith, 2009), a number of publications have addressed the issue of which journals are actually integral parts of the marketing community (Lehmann, 2005). These studies included manifold conceptual and methodological approaches, which range from content analysis (Hanson & Grimmer, 2007) and survey data (Theoharakis & Hirst, 2002) to keyword/text mining (Mela et al., 2013) and network analysis (Goldenberg et al., 2010) of publication data. However, the scope of interest of prior contributions using (secondary) publication data is usu- ally rather restricted to a handful of leading marketing journals or to specific analytical tasks like scholar and/or citation networks. Systematic data-driven investigations integrating different streams of marketing research across the various journals in the discipline remains relatively scarce. In the proposed study we use a highly comprehensive publication data set to explore which distinct topics constitute the field of marketing research, and to identify how these topics are related to each other. Furthermore, we investigate how the leading marketing journals position themselves within the topical continuum and how this positioning evolves over time. A combi- nation of text mining, clustering, and network analysis is utilized to depict emerging research methods and their relation to the discovered research streams in marketing over time.

2 - Which Modeling Scholars Get Promoted (and How Fast)?

César Zamudio, Kent State University, College of Business Administration, Kent, OH, United States of America, czamudi1@kent.edu

The future of quantitative marketing is defined by its research output as much as by the researchers who produce it. Much research has been conducted on the job market for assistant professors in marketing, such as investigations of starting salary, campus visits, and interviews (Close, Moulard and Monroe 2011) and the matching value generated by entry-level placements (Zamudio, Wang and Haruvy 2013). With regards to the market for established professors, extant research has focused on multiple determinants of salary (Mittal, Feick and Murshed 2008) or research productivity counts as a predictor of tenure (Seggie and Griffith 2009). Consequently, in the context of the market for established professors, no study assesses the multiple determinantsof tenure in marketing academia.

■ TC02

Room E208

Word of Mouth and Customer-to-Customer Interactions

Cluster: Special Sessions

Invited Session

Chair: Barak Libai, The Interdisciplinary Center (IDC), Herzliya, 46150, Israel, libai@idc.ac.il

Co-Chair: Renana Peres, Hebrew University of Jerusalem, Mount Scopus Campus, Jerusalem, 90805, Israel, renana.peres@mail.huji.ac.il

1 - Social Contagion in New Product Trial and Repeat

Raghuram Iyengar, Associate Professor of Marketing, University of Pennsylvania, The Wharton School, Philadelphia, PA, 19104, United States of America, riyengar@wharton.upenn.edu, Christophe Van den Bulte, Jae Young Lee

The notion of peer influence in new product adoption or trial is well accepted. We propose that peer influence may affect repeat behavior as well, though the process and source of influence are likely to differ between trial and repeat. Our analysis of the acceptance of a risky prescription drug by physicians provides three novel findings. First, there is evidence of contagion not only in trial but also in repeat. Second, who is most influential varies across stages. Physicians with high centrality in the discussion and referral network and with high prescription volume are influential in trial but not repeat. In contrast, immediate colleagues – few of whom are nominated as a discussion or referral partner – are influential in both trial and repeat. Third, who is most influenceable also varies across stages. For trial, it is physicians who do not consider themselves to be opinion leaders, whereas for repeat, it is those located towards the middle of the status distribution as measured by network centrality. The pattern of results is consistent with informational social influence reducing risk in trial and normative social influence increasing conformity in repeat.

2 - Talk Bursts – Word of Mouth Spikes and Their Role in Forecasting Box Office Sales for Movies

Renana Peres, Hebrew University of Jerusalem, Mount Scopus Campus, Jerusalem, 90805, Israel, renana.peres@mail.huji.ac.il, Sarah Gelper, Jehoshua Eliashberg

New films generate plenty of buzz prior to their launch, through various social media channels. A typical pre-release word of mouth pattern for a film is characterized by an increasing trend towards launch as well as unexpected sudden spikes. This work provides a first comprehensive treatment of word-of-mouth spikes. We introduce a dynamic model, based on Robust Kalman Filter for a spiky signal, and, combined with extensive text mining and content analysis study the drivers, shape, and contents of spikes and their relationship with box office revenues. We test our theory and models on a unique dataset containing pre-release online WOM for the top 157 2010-2011 Hollywood movies. Our results indicate that pre-release spikes are not random outliers but are rather an important component of WOM. Spikes are triggered by both internal dynamics and external events. Relative to non-spike WOM, spike WOM is distributed across multiple movie aspects. As release approaches, spikes are more driven by internal dynamics, they are more opinionated and deal more with the movie storyline. Pre-release spikes are associated with box office revenues – controlling for the overall WOM level, spiky pre-release WOM is associated with higher sales. Including the spikes in the forecasting models improves forecast accuracy.

3 - A Comparison of Product Network and Social Network Based Recommendation Engines for Twitter Users

Christophe Van den Bulte, Professor of Marketing, University of Pennyslvania, Philadelphia, PA, 19104, United States of America, vdbulte@wharton.upenn.edu, Adrian Benton, Shawndra Hill

Social network-based prediction, more specifically targeting friends and contacts of existing customers, has proven successful in various domains like retail banking, telecommunications, and online advertising. However, little is known about for what types of product categories and brands social network-based marketing is especially effective at predicting brand engagement, both in absolute terms and compared to demographic targeting or collaborative filtering. In this work, we compare the performance of a social network-based recommendation engine against a product network-based recommendation engine of the kind used in collaborative filtering. We do so over 700 brands and 223,000 consumers a novel data set collected from Twitter. We compare the performance of the two approaches by product and user features. Preliminary results indicate that the variance in performance within and across methods is related to differences in brand and user popularity as well as brand audience.

4 - Uniqueness and the Social Costs of Design Piracy

Gil Appel, Ben-Gurion University of the Negev, P.O.B. 653, Beer-Sheva, 8410501, Israel, appelg@post.bgu.ac.il, Barak Libai, Eitan Muler

The legality of design piracy is under constant debate among legislators, industry advocacy groups and the legal academic researchers. This study contributes to this discussion by exploring, using a formal analysis based on a fashion growth model, the monetary impact of design piracy from the point of view of the firm that introduces the original design. We look at three main factors that drive the effect of the knockoff. The first is acceleration whereby the presence of a pirated design increases awareness of the design, and thus can have a possible positive effect on the growth of the original. The second is substitution, which represents the loss of sales due to people who would have purchased the original design, yet buy the knockoff. The third is the uniqueness effect, representing the loss of sales that occurs when a design becomes more ubiquitous as a result of the knockoff. Using unique data obtained from eBay's big data lab on the sales pattern of fashion items with known knockoffs, and industry level data to calibrate the model, we find that the damage created by a fashion knockoff may be larger than previously assessed, and demonstrate how the knockoff impact can be largely driven by consumers' quest for uniqueness.

■ TC03

Room E204

Cause-Related Marketing II

Contributed Session

Chair: Carol Miu, University of Texas at Dallas, 800 W. Campbell Rd., Mailstop SM32, Richardson, TX, 75080, United States of America, cxm109420@utdallas.edu

1 - An Economic Model for Charitable Donations

Jaehwan Kim, Professor of Marketing, Korea University, 145,Anam-ro,Seongbuk-gu, Seoul, Korea, Republic of, jbayes@korea.ac.kr, Moon Young Kang, Byungho Park, Greg Allenby, Sanghak Lee

This paper examines the effect of message characteristics on donation behavior using an economic model of giving behavior. The utility for giving can come from one's own contribution and possibly from the combined contributions of others. Donors are assumed to be constrained utility maximizers, and the message attributes affect the degree to which they react altruistically or egoistically. The model is estimated with data from an incentive-aligned study of South Korean consumers, and implications for message optimization and donor targeting are explored.

2 - The Impact of Ethical Leadership on the Effectiveness of Advertising

Niko Goretzki, Kühne Logistics University, Grofler Grasbrook 17, Hamburg, 20457, Germany, niko.goretzki@the-klu.org, Christian Barrot, Jan U. Becker, Niels van Quaquebeke

In recent years, ethical advertising (e.g. environmental advertising, cause-related marketing, etc.) has not only received substantial attention from marketing scholars. Also, companies increasingly use ethically-themed advertisements to persuade consumers to buy their products. In fact, established psychological concepts like symbolic self-completion theory show that consumers may very well substantiate a desirable self-concept of being an ethical person by buying ethically sound products. Whereas the effects of external communication are well-known, the implications of internal leadership behavior on the effectiveness of advertising as well as the consumer perceptions remain unclear. In times of growing transparency about work conditions and public scrutiny of top management behavior, information on a CEO's internal ethical leadership behavior may serve as an additional reference point to consumers. Consequently, inconsistencies between perceived ethical leadership and ethical advertising may thus be viewed as a substantial threat to consumers' genuine purchasing motives that have negative influence on consumer decision processes. Based on an experimental study, this paper provides insights into the impact of ethical leadership behavior on the effectiveness of ethical advertising. Our findings emphasize that discussions on ethical leadership should not be limited solely to the organizational behavior domain but need to include the marketing perspective as well.

3 - Optimizing Charity Race Team Fundraising

Carol Miu, University of Texas at Dallas, 800 W. Campbell Rd., Mailstop SM32, Richardson, TX, 75080, United States of America, cxm109420@utdallas.edu

The concept of a charity walk was first developed in 1970 by The March of Dimes, to raise money to provide medical care to premature babies. In the past two decades, charity races have exploded in popularity, with thousands of nonprofit organizations using 5K, 10K, half marathon, and marathon races as a fundraising vehicle. Many participants choose to form teams and create donation websites to facilitate fundraising. Extant literature has not identified nor explored the relationships among drivers of team charity fundraising success. This research seeks to benefit nonprofit organizations by systematically identifying and understanding the drivers behind successful team fundraising efforts. Using a Python script, data was scraped from over 10,000 webpages across 3 different domains containing race, team, and performance data. Variables of interest include race type and distance, time of year, geographical location, total number of participants, distribution of finish times, team type and size, and fundraised dollars. Preliminary results indicate that total donations increase, but the average funds raised by each team member decreases, with team size. The ideal team size seems to range from 50 to 180 members. Races in Massachusetts and Ohio seem to enjoy a fundraising advantage, while teams participating in races during the months of June and September appear to have raised fewer funds, on average. Charities could use these findings to design better races and encourage the formation of particular types and sizes of teams that may be more successful at fundraising. The desired end result is a higher return on investment on charity race events, which will generate more funds for non-profits to direct towards worthy causes.

■ TC04

Room E201

Understanding Online Behaviors

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Sam Hui, New York University, 40 West 4th Street, New York, NY, 10012, United States of America, khui@stern.nyu.edu

1 - The Effect of Calorie Posting Regulation on Consumer Opinion

Dinesh Puranam, Doctoral Student, Cornell University, Samuel Curtis Johnson Graduate School, Ithaca, 14850, United States of America, dp457@cornell.edu, Vrinda Kadiyali, Vishal Narayan

In 2008, New York City mandated that all multi-unit restaurants post calorie information in their menu. For managers of multi-unit and stand-alone restaurants, and for policy makers, a pertinent goal might be to monitor the impact of this regulation on consumer conversations. We propose a scalable Bayesian topic model to measure and understand changes in consumer opinion about health (and other topics). We calibrate the model on 761,962 online reviews of restaurants posted over 8 years. Our methodological contribution is to generalize topic extraction approaches in marketing and computer science. Specifically, our model does the following: a) each word can probabilistically belong to multiple topics (e.g. "fries" could belong to the topics "taste" as well as "health"); b) managers can specify prior topics of interest such as "health" for a calorie posting regulation; and c) review lengths can affect distributions of topic proportions so that longer reviews might include more topics. Through careful controls, we isolate the potentially causal effect of regulation on consumer opinion. Following the regulation, there was a small but significant increase in the discussion of health topics. Health discussion remains restricted to a small segment of consumers.

2 - Examining the Impact of Choice Set Design on Preference for the "No-choice" Alternative

Jeffrey Dotson, Associate Professor of Marketing, Brigham Young University, 603 N. Ridge Drive, Provo, UT, 84606, United States of America, jeff.dotson@byu.edu, Jeff Larson, Mark Ratchford

Given fixed margins, high search volume, and an intensely competitive environment, Internet marketplaces like Priceline, Amazon, and Orbitz are primarily interested in maximizing purchase conversion. Alternatively expressed, these types of marketplaces are most successful when they are able to minimize choice deferral, thus increasing the total realized volume of sales. In this paper we develop a random utility model that is able to account for the effects of choice set design on preference for the no-choice alternative. Our model is derived from psychological models of evidence accumulation and choice. By extending this class of models into contexts where choice is unforced, we are able to make predictions that are consistent with the theory of choice deferral. We test our model using conjoint data collected to study the influence of sort-order on preference for hotels and show that optimal sort-order for hotels is a function of both the intrinsic attractiveness of hotels presented and the order in which they appear. We further demonstrate the value of our model by applying it to market data provided by a large online travel agency (OTA). We show that optimization of hotel sort order conducted using our model leads to an average increase of purchase conversion of 5%.

3 - The Value of Using Customers' Historical Online Review Behaviors in Making Customer Churn Prediction

Yu Jeffrey Hu, Associate Professor, Georgia Institute of Technology, 800 W Peachtree St, Atlanta, GA, 30308, United States of America, yuhu@gatech.edu, Jiayin Qi, Jia Li

Customers' historical purchase measures, such as recency, frequency, and monetary value (RFM) measures, are widely used by both marketing practitioners and researchers to predict customers' future purchase behaviors such as customer churn. However, today's customers often write online product reviews to share their consumption experiences. In this research, we first construct an innovative set of online review RFM measures. We then explore how such online review RFM measures can improve the prediction accuracy of customer churn to a level above and beyond the accuracy produced by using only traditional purchase RFM measures. We obtain a unique data set on 4,000 customers' purchase and online review behaviors from Jan 2011 to Dec 2013 from Dianping.com, China's largest online review website that not only provides restaurant reviews but also sells restaurant coupons. We find that using only customers' purchase RFM measures and individual characteristics, the prediction accuracy of customer churn behaviors is 97.2% and the recall rate of churn is 53.6%. However, adding customer's online review RFM measures to the aforementioned model can dramatically improve the prediction accuracy of both customer churn behaviors (from 97.2% to 98.9%) and the recall rate of churn (from 53.5% to 85.7%). The robustness of our results is further tested using a validation data set. Our paper points out the importance of using online review RFM measures in a firm's marketing strategies. It also enhances the current understanding of customer churn behaviors as we have shown that customer churn is related to online review behaviors.

4 - Understanding Gamer Retention in Social Games using Aggregate DAU and MAU Data

Sam Hui, New York University, 40 West 4th Street, New York, NY, 10012, United States of America, khui@stern.nyu.edu

With an estimated market size of over $6 billion in 2011, "social" games (games played over social networks such as Facebook or Google+) have become increasingly popular recently. Understanding gamer retention and churn is important for game developers, as retention rate is a key input to gamer lifetime value. However, as individual-level data on gaming behavior are not publicly available, developers generally rely on only aggregate statistics such as DAU (daily active users) and MAU (monthly active users), and compute ad hoc metrics such as the DAU/MAU ratio to assess retention rate, often resulting in very inaccurate estimates. I propose a Bayesian approach to estimate retention rates of social games using only aggregate DAU and MAU data. The proposed method is based on a BG/BB model (Fader et al. 2010) at the individual level in conjunction with a data augmentation approach to estimate the model parameters. After validating the performance of the proposed method through a simulation study, I apply the proposed approach to a sample of 379 social games. I find that the average 1-day and 7-day retention rates for new players across games are 59.0% and 10.5%, respectively. Further, my results suggest that the median break-even acquisition cost per gamer is about 13.1 cents. In addition, giving out a "daily bonus" or limiting the amount of time that gamers can play each day may increase 1-day retention rate by 6.3% and 6.9%, respectively.

■ TC05

Room E231

Internet & Interactive Marketing III

Cluster: Internet and Interactive Marketing

Invited Session

Chair: William Rand, University of Maryland, 3457 Van Munching, College Park, MD, 20742, United States of America, wrand@umd.edu

1 - Homophily and Influence: Capturing the Value in the Interdependence of Friends' Preferences

Peter Pal Zubcsek, University of Florida, P.O. Box 117155, Gainesville, FL, 32611-7155, United States of America, pzubcsek@ufl.edu, Tuan Q. Phan, Xuesong Lu

It is well-known (and easily measured) that in social networks, the preferences of network neighbors tend to be correlated. On the other hand, little is known on how advertisers can leverage this property of consumer networks. Should firms adjust their pricing and advertising strategies based on the level of homophily (assortativity) among the consumers targeted? To answer this question, we build an analytical model that adds network connections between consumers in a circular market in a way that the level of homophily in the network is captured by a single parameter. Our setup extends earlier models in two important ways. First, we no longer assume that each consumer, including those consumers who do not receive positive utility from purchasing the advertised product, may spread word-of-mouth (WOM). Instead, the firm may only rely on WOM spread by those consumers who are both reached by advertising and have a reservation price above the price charged by the monopolist for the product. Second, we allow neighbors' preferences to be positively or negatively correlated, thereby introducing homophily in the model. We find that as the level of homophily in the network increases, a monopolist marketer finds it optimal to raise the price for its product. However, whereas at low levels of homophily, the firm increases its advertising as network neighbors' preferences become more positively correlated, the opposite happens at high levels of homophily: further increasing the correlation of neighbors' preferences causes the monopolist to decrease its advertising. Under duopolistic competition of two horizontally differentiated firms, we find only symmetric equilibria; with pricing patterns mostly similar to the monopoly results. However, in scenarios where consumers' baseline valuation is high – potentially corresponding to better targeting capabilities – competing firms may find it optimal to first decrease and then increase their advertising. Our results show how to profitably incorporate the homophily of the network of social influence in firms' advertising and pricing strategies.

2 - Analyzing Influence Contagion among Twitter Users: Do a Few Influencers Really Exist?

Makoto Mizuno, Professor, Meiji University, 1-1 Kanda-Surugadai, Chiyoda-ku, Tokyo, 101-8301, Japan, makmizuno@gmail.com, Makoto Abe, Naoki Shinbo

To utilize social media for spreading word-of-mouth in favor of own brand, some previous studies have emphasized the role of a few influential people (influencers, influentials) as seeds for a viral campaign (e.g., Goldenberg et al. 2009; Trusov, Bodapati & Bucklin 2010); On the other hand, there exists powerful criticism against this idea (Watts & Dodds 2007; Bakshy et al. 2011). Analyzing Twitter data on smartphones such as iPhone and Android, we offer a new evidence for reconciling this debate. Firstly, we construct a bipartite network between influencer candidates, identified by a frequency of retweets, and their followers. Secondly, defining influence as a significant effect to activate the followers' tweets on the same topic, we estimate 'true' influence between influencer candidates and their followers, allowing for the heterogeneity in both each influencer's influence and each follower's responsiveness. To estimate individual influence/responsiveness, we apply a modified MCMC algorithm for these networked users. The estimated influence network is evidently smaller than the initial one based on simple follow behaviors, suggesting that most of the follow links observed in Twitter do not have significant influence. Nevertheless, the resulting influence network shows the existence of hard-core influencers who significantly activate others' word of mouth. To conduct an effective viral campaign based on these findings, we perform simulation using an agent-based modeling. Finally, we discuss the limitation and future directions of this study.

3 - Using the Entire Network to Predict Individual Level Behavior

Xueming Luo, Charles Gilliland Chair Professor of Marketing, Temple University, 1801 Liacouras Walk, Philadelphia, PA, United States of America, Xueming.Luo@temple.edu

Marketers often predict individual-level consumer behaviors before engaging in marketing actions. With the availability of big data, both social network and behavioral data, marketers can observe rich individual-level behaviors in the entire community and use the data to predict future behaviors. However, while network data provides additional information for predictive purposes, it also adds a new dimension, big data volume, that presents new challenges such as the computational burden associated with analyzing trillions of potential network connections and effects across the entire social network. It is also unclear whether using information from the entire network will improve the prediction of future behaviors. In this paper, we develop a method to predict consumer behaviors in an online network setting using the past behaviors observed from the entire network. Specifically, we propose a new approach in modeling Fast Fully connected Continuous Conditional Random Fields to not only take advantage of using the entire network for prediction purposes but also reduce inference time on big network data to about ten minutes. In the context of online gaming usage, we find that including network effects from the entire social network (our proposed model) outperforms baseline models in terms of forecasting accuracy. Firms with big data can use our method to develop more accurate predictions of consumer behaviors in a large network setting.

4 - Influence Identification in Big Networks using Sampling

William Rand, University of Maryland, 3457 Van Munching, College Park, MD, 20742, United States of America, wrand@umd.edu, Shankar Prawesh, Matthew Henricks

In the past few years there has been a phenomenal increase in the volume of network-based data generated due to the increase in online activities, wider adoption of mobile devices and the omnipresent use of social media. Though this data has a huge potential upside for providing unique and interesting insights, the sheer volume of data that needs to be processed poses a significant challenge to the management strategist. This problem is further compounded by the fact that designing and implementing many online marketing strategies requires careful analysis to characterize the influence of the users of social media. In this research, we address the problem of designing strategies to deal with big data for network-based measures of influence. In particular, we consider degree centrality, betweenness centrality and PageRank to identify influentials in a given network. Our findings suggest that Hadoop MapReduce, a popular bigdata technology, performs well for less computation intensive calculations (e.g. degree centrality) on very large networks (millions of nodes). However, Hadoop MapReduce is a poor fit for measures that require large information about the global graph, such as betweenness centrality or PageRank. To address this problem we explore computationally efficient, but accurate, network sampling techniques that help to identify influentials in very large networks. Based on these results, we make recommendations to managers about how to collect network data and identify influentials and illustrate our methods in both real-world and synthetic graphs.

■ TC06

Room E234

User-Generated Content III

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Hsin-Chen Lin, Purdue University, 403 W. State Street, West Lafayette, IN, 47907, United States of America, lin42@purdue.edu

1 - Online Daily Deals: The Role of Online Reviews in Firm Decisions

Paul Hoban, PhD Candidate, University of California-Los Angeles, Anderson School of Management, 110 Westwood Plaza, Los Angeles, CA, 90095, United States of America, paul.r.hoban@gmail.com

Online daily deal sites provide a marketplace in which local merchants sell vouchers for goods and services to geographically targeted consumers. While there are certainly a number of merchants for whom daily deals have been effective, stories of failure are rife in the popular press. In this paper, I examine how managers' expectations of changes in online reviews impact the decision to offer a daily deal. To address this question, I explore both model-free evidence and the results of a dynamic model of firm participation and outcomes. Underlying this work is a unique dataset containing all restaurants in the Los Angeles area, their characteristics and customer reviews as reported by Yelp.com, and their participation in daily deals from March 2010 through July 2012 from both Groupon and LivingSocial. Early results point to several interesting findings. First, daily deals increase review volume and decrease ratings, in line with previous research. Second, repeated offers seem to negatively impact future ratings, even after the deal expires. Finally, firms appear to be actively considering reputational impact in their daily deal decisions, extending such offers only when the negative reputational impact of doing so is relatively small.

2 - The Business Value of Electronic Word of Mouth (eWOM): A Meta-analytic Review

Ana Babic, Doctoral Candidate, HEC Paris, 1 Rue de Liberation, Jouy-en-Josas, 78350, France, ana.babic@hec.edu, Francesca Sotgiu, Kristine de Valck, Tammo Bijmolt

The growing amount of electronic word of mouth (eWOM), such as online reviews, star ratings, and Facebook "likes", has been significantly impacting the way consumers make purchase decisions. Empirical studies establish a monetary effect of eWOM, but disagree on what drives this effect. While some evidence suggests that the main predictor of business performance is the volume of eWOM, other measures (e.g., valence, variance, mere presence) have also been found influential. The authors conduct a meta-analysis of 1,218 effect sizes based on over 30 million observations from 76 studies. They investigate whether the effect of eWOM varies across eWOM formats, online platforms, and product types, while controlling for potential confounding effects of methodological choices. Results demonstrate statistically significant differences across eWOM sub-measures, with volume being the most important metric linked to business performance. Also, the findings suggest a larger correlation between eWOM and business performance 1) for tangible products vs. services, 2) when eWOM is collected on social media platforms vs. retailers' websites, and 3) when eWOM format is non-textual (e.g., star rating). Moreover, 4) the effects are stronger in Europe than in North America. From a methodological point of view, future research should consider that the impact of eWOM may be underestimated 5) when sentiment analysis is manual vs. automated and 6) when advertising and product price are not controlled for, while the effects may be overestimated 7) when promotions are not accounted for. A new revised definition of eWOM is proposed by the authors. These findings have implications for managers involved in promotion and online community management, as well as for future research on eWOM.

3 - Responding to Negative Feedback in the Online Environment: Does Managerial Participation Help?

Stacey Sharpe, Marketing PhD Student, Rensselaer Polytechnic Institute, 110 8th Street, Troy, NY, 12180, United States of America, sharps@rpi.edu, T Ravichandran, Dongling Huang

The prevalence of electronic Word-of-Mouth (eWOM) and the potentially damaging implications of negative information on consumer attitude and behavior substantiate the need for firms to combat the potentially harmful effects of consumer complaining behavior in online review forums. Using data from TripAdvisor.com, we investigate the use of unconcealed managerial presence and responsiveness as a strategy for mitigating the effect of negative information in consumer review forums. More specifically, we test the impact of managerial participation in review forums that facilitate consumer generated content. Key findings of our empirical evaluation show (1) a positive relationship between managerial participation and consumers' future review valence, (2) that responding to negative reviews authored by salient reviewers has a positive impact on the post response valence of responding firms, and (3) that the disclosure of identity-descriptive information by responding managers positively impacts the valence of future reviews. We contribute to the extant literature in several ways. First, this study generates empirical support for overt managerial participation as a potential strategy for reputation and relationship management online. Second, our study produces empirical insights that are applicable for crisis management activities related to the detection and safeguarding of the organization from the potentially damaging effects of negative eWOM. In addition, we evaluate complaint management in the review forum environment – offering insights into previously hidden aspects of firm-consumer interaction and outcomes.

4 - What Makes Your Word Influential? A Conjoint Analysis of Online User-generated Content

Hsin-Chen Lin, Purdue University, 403 W. State Street, West Lafayette, IN, 47907, United States of America, lin42@purdue.edu

When consumers search for products to purchase, they pay weighted attention to the most influential reviews. What makes reviews influential? This paper uses a conjoint analysis to evaluate consumers' utilities for various types of reviews that differ in (1) length of reviews, (2) the content of reviews, (3) the badges of reviewers, and (4) the engagement of reviewers. Each review is described with a four-component profile, and each component has several levels. We estimate the consumer response to review attributes at the review level. Our results show that quality of review content and the reviewer's engagement have the largest impact on a review's helpfulness ranking regardless of whether the reviewers are established. The findings have important implications for individuals and marketers who are seeking for more followers.

■ TC08

Room E304

Advertising Effectiveness I

Contributed Session

Chair: Maren Becker, University of Cologne, Albertus Magnus Platz1, Cologne, 50923, Germany, maren.becker@wiso.uni-koeln.de

1 - Effect Measurement of Alternative Social Marketing Advertisings

Michael Brusch, Anhalt University of Applied Sciences, FB6, Marketing and Corporate Planning, Bernburger Str. 55, Köthen, D-06366, Germany, m.brusch@emw.hs-anhalt.de, Stefanie Fiedermann

In marketing it is tried regularly to convey messages adequately to target groups. Up to now, however, this appeared in the area of social marketing and in particular in the area of environment-conscious being, i.e. with the sensitization for environment-conscious beliefs and actions, difficultly. The purpose is to distinguish advertising alternatives with which a very big target group can be reached as efficiently as possible. To measure this efficiency the effect from social marketing related short films will be analyzed. Here, two essential advertising effect determinants are varied (Kroeber-Riel et al. 2009): kind of advertisement (emotional, informative or mixed) and involvement of customers (high or low involved). For data collection a combination of a subjective method (questionnaire for opinions and attitudes) and an objective method (electrodermal analysis for physiological reactions) is used. The results show generally that short films can increase the wish according to further information of the respondents in this campaign context. Furthermore, they show that there is a distinction of the different kinds of advertisements. Here, it becomes apparent that demographic characteristics as age and gender of the respondents have an influence on their activation. In addition, this investigation points out that the used combination of questioning and measurement of the electrodermal activity can be applied very well within the field of social marketing.

2 - Shorter but Equally Effective: Video Abstracting of Commercial

Shasha Lu, Fudan University, Lane78, Wuchuan Road, Shanghai, China, fdshashalu@gmail.com, Min Ding

Advertisers strive to produce effective commercial ads with smaller budgets, which are largely determined by the length of the commercial and thus the TV time it need to purchase. Video abstracting research from computer science has provided new tools and techniques to select useful contents from a regular video to present to viewers. In this project, we propose and test a model using video abstracting technology, combined with marketing models, to extract critical information from commercials and produce shorter length commercials with minimum loss of effectiveness. This method can reduce the length of commercial without jeopardizing advertisement effectiveness, thus reduce the cost of ad campaign. We test the model in a between-subject experiment, where effectiveness of commercial is measured by recall, attitudinal variables as well as purchase intention. We expect the application of proposed model will greatly reduce ad campaign cost while maintaining effectiveness of the commercials.

3 - Visual Distraction as a Measure of Engagement in Moving Images

Morna Cerf, Professor of Marketing, New York University, Stern School, 40 West 4th St., New York, NY, 10038, United States of America, Eric Greenleaf

A major challenge in marketing today is to motivate consumers to be engaged in marketing actions. Many of these actions, such as video advertisements, television programs, and movies, involve moving images. Thus, marketers and consumer researchers are interested in methods to measure engagement. However, many existing methods, such as surveys, are subject to response bias, require extensive researcher intervention, or can only be completed after a consumer is done watching. We propose measuring engagement by using eye tracking to examine how people's gazes move to small distractor symbols that appear and disappear in a moving image. In the first study, participants watched a video segment from an episode from an Alfred Hitchcock television show. The segment was watched either in a normal presentation, to create relatively high engagement, or scrambled into rearranged three-second segments, to create relatively low engagement. In the second study, participants watched a segment from a World Cup soccer match, which also contained relatively engaging events, such as kicks on goal and corner kicks. Participants either knew that a goal would not be scored in that segment (relatively low engagement) or did not know (relatively high engagement). For both studies, we found that participants had less of a tendency to move their gazes toward the distractors in the relatively high engagement condition compared to the relatively low engagement condition.

4 - Advertising Content and Product Sales Performance

Maren Becker, University of Cologne, Albertus Magnus Platz 1, Cologne, 50923, Germany, maren.becker@wiso.uni-koeln.de, Monika Käuferle, Werner Reinartz

Despite a long-standing history and many strong findings, research on advertising effectiveness still ranks high on the academic and practitioner agenda. With respect to the impact of TV advertising (ads) on sales, existing econometric response models mostly focus on the effects of advertising spending and scheduling. Comparatively much less attention has been devoted to executional elements of the advertising message. However, given the ever increasing number of ads being aired and the limited cognitive capacity of consumers, marketers need to find ways to make their advertisements stand out and be recognized, beyond the mere media spending. The current study attempts to shed light on this aspect. We investigate the effects of distinct executional elements of an ad on the sales performance of the advertised product. In particular, we are interested in the dimensions of (1) ad complexity (e.g., visual and verbal complexity) and (2) the ad's representation of reality (e.g., authenticity, exaggeration etc.). Moreover, as the impact of the executional elements might depend on the specific context, we also analyze how these moderating effects vary across different product categories (e.g., with low vs. high involvement) as well as types of brands (e.g., new vs. established or utilitarian vs. hedonic). We conduct our study in a FMCG context in Germany, covering 297 ads across 68 brands over a period of 3 years. The objective is to pinpoint how ad execution enhances ad effectiveness and, thereby, to help managers increase their return on advertising investment.

■ TC09

Room E301

Competitive Marketing Strategy III

Contributed Session

Chair: Sergio Meza, University of Guelph, 50 Stone Road East, Guelph, ON, Canada, smeza@uoguelph.ca

1 - Effects of Own and Competitors' Product Quality Ratings on Performance

Shrihari Sridhar, Assistant Professor of Marketing, Pennsylvania State University, 457 Smeal College of Business, University Park, PA, 16801, United States of America, sus55@psu.edu, Raji Srinivasan, Gary Lilien

Prospective consumers learn about other consumers' evaluations of product quality before they choose a product. In this research, we investigate the causal impact of a firm's customer-evaluated product quality ratings on competitors' sales performance. We combine consumers' online ratings of hotels and the hotels' offline sales in ten cities in a large state in the United States. We design a time window mimicking a quasi-experimental setting where in every zip code, we choose the time period where only the first hotel received online ratings (focal hotel) while all other hotels (competitors) did not receive online product ratings. This enables us to isolate the effect of one firm's customer-evaluated product quality ratings on its own sales and competitor sales. To benchmark the effect, we augment the data set with a period where no hotels in the zip code received sales (pre-period) and with hotels in neighboring zip codes during the same periods that did not receive customer-evaluated product quality ratings (control group). We find that the focal hotel's average online rating positively affects its sales and negatively affects the sales of competitors. Further, the negative effect of average online rating on competitor sales is contingent on the nature of market competition in the zip code (number of hotels, geographic proximity to the focal hotel). The findings provide insights on how customer-evaluated product quality ratings affect competition and the role of market structure therein.

2 - Effects of Competitive Context on the Market Structure Based on the Heterogeneity of Choice Sets

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This research investigates the possibility which avoid the commoditization in mature markets. As many previous papers have indicated, the phenomenon of commoditization is sure to come following the market maturation (cf. Christensen 1997; Moon 2005). In turn, this leads to keen price competition. Marketers cannot avoid the destiny of this phenomenological consequence. For the marketing issue, we propose that marketer should take advantage of the marketing competition if there is no marketing tactics. However, we do not notice that they have no chance to beat the commoditization. In this research, we consider that there are some external marketing resources (EMR) that are desirable for their brands in the mature markets. For the above purpose, we investigate the effects of competitive context as the one of EMR. Competitive context is the embedded resources in marketing competition. Previous research has verified that effects on consumers' brand evaluation and price sensitivity (cf. Huber, Holbrook, and Kahn 1986). For discovering the effects of competitive context as EMR in marketing competition, we selected the beer market, composed of 21 brands. And we measured the brand preference and collected the data of multiple brand choices. Then, we develop the hierarchical Bayesian model that includes the heterogeneity of consumers' choice set and each brand's vulnerability and clout (cf. Kamakura and Russell 1989). As the results, there are some positive and negative effects of competitive context among brands. We will show such EMR in the presentation.

3 - Understand Multi-item Voluntary Disclosure Strategy in the Context of Sustainable Development

Wei Zhang, School of Managment, Fudan University, No.670,Guoshun Road, Shanghai, China, daisyzw@gmail.com, Min Ding, Yinghui Zhou

Firms often need to make disclosure decisions on multiple items (including many in marketing) simultaneously for various strategic reasons. Such decisions have become more and more important these days due to transparency and accessibility of information, globalization, and social pressure on environmental and social responsibility. They have also increasingly become a competitive strategic decision as firms in the same sector choose their actions based on (or in anticipation of) what their competitors will do. To our knowledge, existing literature, however, has only studied one disclosure item at a time, or utilized aggregate voluntary disclosure index to measure the overall disclosure level and quality. This paper will fill this important research gap, we will study the decision of choosing which subset of items to disclose, and how they impact various outcomes, The empirical context we use is the Global Reporting Initiative (GRI), as over 5,909 organizations have voluntarily disclosed about 13,620 sustainability reports in past 15 years via GRI guideline, but their choices of disclosing items among over one hundred GRI guided index are very different. We expect our research will contribute to how academics should study multi-item simultaneous voluntary disclosure decisions, as well as guidance to the practitioners, especially those in involved in managing their firms' sustainability profile.

4 - "We are the Champions": Examining the Network Effects of Rival Teams Competing in the Same Market

Sergio Meza, University of Guelph, 50 Stone Road East, Guelph, ON, Canada, smeza@uoguelph.ca, Mohammed Kerbek

Basic economic theory suggests that the presence of competitors in the same market has the effect of decreasing revenues. This is driven both by having to share the market and by the pressure on price competition. However, on the list of the most financially successful soccer franchises in Europe the number of teams with direct competitors in the same metropolitan area is overrepresented. This success may be alternatively explained by the endogeneity in the location decision. Teams would locate in markets with a larger population or higher income. After controlling for such factors this paper explores empirically, how the rivalry of local competition may improve attractiveness of the teams thus generating more revenues. In this paper we develop and empirically test our model using 20 years of club level data in 5 of the top European leagues. With the results of our model we play some "what-if" scenarios. If a club were to relocate, which would be the net result of such move? Or should a successful club open second or third cities? Would a club benefit from reinforcing a weak close rival? With these scenarios we finally generate some insights with interesting managerial implications.

■ TC10

Room E331

Pricing: Dynamics II

Contributed Session

Chair: Joseph Pancras, Associate Professor, University of Connecticut School of Business, 2100 Hillside Road Unit 1041, Storrs, CT, 06269, United States of America, jpancras@business.uconn.edu

1 - Intertemporal Price Discrimination with Complementary Product: The Case of E-book and E-reader

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The impact of e-book on print book sales and the dispute of e-book pricing right has received increasing attention in the publishing industry. This paper estimates a dynamic demand model of consumer e-reader adoption, book purchase and format choice. The estimated demand model is then used to study intertemporal price discrimination (IPD) for a monopolist selling complementary good. This setting has rarely been studied before but has become increasingly relevant in online business. Using a unique individual level transaction data set in years 2008-2012, I find that consumers have heterogeneous reading tastes and price elasticity, as well as extra format utility from e-book reading. Taking supply side prices as exogenously given, counterfactual simulation shows that on average 28% of the e-book sales come from cannibalizing online print book sales and 72% come from market expansion. I then solve for the monopoly platform's optimal pricing problems of e-reader and e-book with both firm and consumers forward-looking. Besides the price skimming incentive in traditional IPD literature, the existence of e-book as a complementary good provides an extra penetrating incentive and changes the optimal pricing, output, profitability, and welfare results from IPD. In particular, it is not always profitable for the firm to practice IPD on the complementary good. It implies that agency model – where publishers set e-book price – can sometimes be more profitable than wholesale model for the platform.

2 - Product and Pricing Decisions in Crowdfunding

Xi Li, University of Toronto, Rotman School of Management, Toronto, ON, Canada, xi.li13@rotman.utoronto.ca, Mengze Shi, Ming Hu

This paper studies the optimal product and pricing decisions in crowdfunding mechanism under which a project between a creator and many pre-buyers will be realized if and only if the total funds committed by the pre-buyers can reach a pre-specified goal. When the potential pre-buyers are sufficiently heterogenous in their product valuations, the creator should offer a line of products with different levels of product quality. Moreover, compared to the traditional case where orders are placed and fulfilled individually, under the crowdfunding mechanism offering a product line is more likely to be optimal and the optimal quality gap between products should be smaller. The paper also shows the impact of crowdfunding mechanism on price dynamics over time. Together, these results underscore the substantial impact of the emerging crowdfunding mechanisms on common marketing decisions.

4 - A Longitudinal Study of Price Changes in Perishable Goods Markets

Joseph Pancras, Associate Professor, University of Connecticut School of Business, 2100 Hillside Road Unit 1041, Storrs, CT, 06269, United States of America, jpancras@business.uconn.edu, Satheesh Seenivasan, Dinesh Gauri, S. Sriram

Inter-temporal price changes are common characteristics of firms in travel industry which is characterized by perishable capacity, demand uncertainty and advanced booking. Such wide changes in prices lead to a greater dispersion in prices even for same booking class across multiple time periods. In this study, we focus on studying the extent of intra-firm price dispersion and factors driving this phenomenon in cruise industry. Unlike other travel industries, the cruise industry is characterized by homogenous leisure traveler segment with heterogeneous product valuations. Using proprietary booking data from a major North American cruise operator, we investigate the role of demand uncertainty, consumer heterogeneity in valuations, product characteristics and seasonality in driving price dispersion at overall cruise level as well as at individual cabin levels. We find that price dispersion increases closer to departure. Dispersion also increases with demand uncertainty, but the effect of demand uncertainty is mitigated as it gets closer to departure. Higher switch costs are found to be associated with higher price dispersion. We also find that premium booking classes have higher price dispersion and there is significant variation across these different booking classes in the extent of dispersion as well as the role of factors in driving dispersion.

■ TC11

Room E334

Identification of Causal Effects: Strategies and Applications

Cluster: Special Sessions

Invited Session

Chair: Bryan Bollinger, New York University, Stern School of Business, 40 West 4th Street, New York, NY, 10012, United States of America, bbolling@stern.nyu.edu

1 - Leveraging Peer Effects: The Impact of Social Interaction-based Programs on the Diffusion of Solar Panels

Bryan Bollinger, New York University, Stern School of Business, 40 West 4th Street, New York, NY, 10012, United States of America, bbolling@stern.nyu.edu, Ken Gillingham, Hilary Staver

Economists have demonstrated that peer effects play an important role in a variety of settings, from educational attainment to the adoption of new energy technologies. The mere existence of peer effects in low-carbon technologies (e.g., see Bollinger and Gillingham 2012) suggests the possibility of non-price informational policies and programs to leverage these peer effects to induce adoption – possibly at a low cost per ton of carbon. This study examines a large-scale program to use social interaction-based interventions designed to leverage peer effects to facilitate the adoption of solar photovoltaic panels. As part of the Solarize program in Massachusetts and Connecticut, communities were randomly selected and provided with group pricing, peer information through solar ambassadors, and social media interventions. We examine both the effectiveness of the program, as well as the cost-effectiveness of the program in reducing carbon dioxide emissions.

2 - Demand for "Healthy" Products: Do Front-of-Package Claims Matter?

Anita Rao, University of Chicago, Chicago, IL, United States of America, anita.rao@chicagobooth.edu, Emily Wang

Are consumers impacted by front-of-package claims made by manufactures in the ready-to-eat cereal market? The answer has both policy and marketing implications. This paper aims to answer this question by studying consumer purchase behaviors over time using data on consumer cereal purchases from 2004-2011 along with information on new product introductions, front-of-package claims and product nutrition. Our identification comes from observing products which retain the same ingredient constitution and nutritional content but have very different front-of-package claims over time. Observing demand in response to these packaging changes we are able to identify the effects marketing actions of firms can have on consumer demand.

3 - Positive Spillovers and Free Riding in Advertising of Prescription Pharmaceuticals: The Case of Antidepressants

Brad Shapiro, Massachusetts Institute of Technology, Cambridge, MA, United States of America, btshapir@mit.edu

Television advertising of prescription drugs is controversial, as evidenced by the fact that it is illegal in all but two countries. Given the controversy surrounding the practice, its effects are not well understood. Exploiting the policy change making such advertising possible in the United States as well as a spatial identification at the border approach, I estimate that television advertising of prescription antidepressants exhibits significant positive spillovers on rivals' demand. I then construct and estimate a multi-stage demand model which allows advertising to be pure category expansion, pure business stealing or some of each. Estimated parameters indicate that advertising has strong market level demand effects which tend to dominate business stealing effects. Spillovers are both large and persistent. Using these estimates and a simple supply model, I explore the consequences of the positive spillovers on firm advertising choice. In a co-operative advertising campaign, simulations suggest that the co-operative would produce on average five times as much advertising as is observed in competitive equilibrium resulting in a 13.7 percent increase in category size and an 18.3 percent increase in firm profits.

4 - Multi-channel Shopping Behavior and its Implications for Retail Entry

Scott Shriver, Columbia University, New York, NY, United States of America, ss4127@columbia.edu, Bryan Bollinger

With the advance of internet and mobile technologies, retailers must manage an increasingly complex combination of "always on" digital channels in addition to traditional "brick and mortar" outlets. A key question of interest to marketing practitioners and academics is to what extent digital and physical retail channels act as strategic substitutes that cannibalize sales or as strategic complements that drive incremental demand. In this research, we use data from a North American specialty retailer to empirically measure the extent of cross-channel complementarity or substitution. To identify these effects, we leverage rich variation in the distance to physical stores induced by a rapid expansion of the firm's retail footprint. As an application, we demonstrate how our estimates may be used to identify promising locations for new physical stores.

■ TC12

Room W300

Dynamic Models

Contributed Session

Chair: Olivier Rubel, University of California, Davis, One Shields Avenue, Davis, CA, 95616, United States of America, orubel@ucdavis.edu

1 - Preference Heterogeneity, Product Line Length and Dynamic Product Launch

Xing Li, Stanford University, 579 Serra Mall, Stanford, CA, 94305-6072, United States of America, xingli@stanford.edu

Consumers are heterogeneous in preference and firms can make use of preference heterogeneity by horizontally differentiate their products and design product lines. We propose two measures for consumer heterogeneity, which are dispersion of in-line market share and structural parameter of dissimilarity in Nested Logit Model. In addition, we build a structural model to rationalize two observations. First, there exists huge cross-sectional differences in the length of product lines because of the difference in preference heterogeneity in different lines; second, firms do some in-market learning and adjust their line strategy over time. We use this model to analyze firm's behavior in the market of potato chip.

2 - A Dynamic Investigation on Innovation Incentives

Nan Yang, National University of Singapore, 15 Kent Ridge Drive, Singapore, Singapore, yangnan@nus.edu.sg

This paper is motivated by the puzzling phenomenon that barrier to entry may encourage innovation while patent protection may not. For instance, more strict FDA screening since the 1962 Congress Amendments leads to faster development of important drugs. In this paper, I develop a model of dynamic duopoly entry game to study firms' incentives for product innovation. In a market with demand uncertainty and sunk cost of entry, firms first decide whether to participation in an R&D race for inventing a new product, and subsequently compete in the product market after successful innovations. I show that the model has a unique "natural" Markov-perfect equilibrium, an equilibrium in which once joined an R&D race, the firm with better profitability perspective never exits first. The model demonstrates that in the absence of patent protection, a higher barrier to entry may encourage a firm to innovate more aggressively: It participates in the R&D race with lower expected demand. This is because higher barrier to entry makes it more likely for the first entrant to monopolize the product market. On the other hand, introducing patent protection increases the payoff for the winner of the R&D race and makes the race more fierce. Anticipating a more fierce race, the first entrant only participates in the R&D race when expected demand is high.

3 - Talking Away the Vice? Communication and Vices

Rachel Shacham, University of Minnesota, Carlson School of Management, 321 19th Avenue South, Suite 3-150, Minneapolis, MN, 55455, United States of America, rachelsh@gmail.com, Tulin Erdem, Peter Golder

We develop an empirical model that allows us to study the relationship between vice and communication between individuals while accounting for self-selection. The method developed in this study is particularly well suited to the issues that occur while studying vice (in contrast to other types of goods). In particular, we allow for heterogeneity that differentiates between heavy and light users. We estimate the model using a unique dataset that contains detailed individual-level data over time. Third, we allow learning in the previous model. We test our model and generate insights using two data sets: (i) the web browsing behavior of 3000 individuals over one year and (ii) pornography websites categorized by strength.

4 - Managing Blood Donations by Marketing

Olivier Rubel, University of California, Davis, One Shields Avenue, Davis, CA, 95616, United States of America, orubel@ucdavis.edu, Oliver Rutz, Ashwin Aravindakshan

Blood banks supply the blood needed by hospitals to save lives. Blood cannot be bought from donors and blood banks use marketing to motivate people to give blood. Many, if not most, blood banks in the U.S. are small community-based non-for-profit organizations with limited marketing budgets. As a result blood banks increasingly rely on novel and inexpensive online media, i.e., paid, owned and earned media (POE), in their marketing efforts. We propose a dynamic model that links POE media activities to blood donations to help blood banks manage blood supply. We analytically characterize the optimal forward-looking paid media strategies of a blood bank. We account for the asymmetric costs relating to shortage and excess of blood as well as the possibility of a cost-free target donation zone. We detail novel advertising resource allocation rules in the case of blood banks and show that regions exist in which traditional allocation recommendations do not apply. Additionally, we discover that under certain circumstances, owned/earned media activities hurt the blood bank's performance, despite being (mostly) free. We validate our analytical model by using daily collection data from a community-based blood bank and measure the effects of POE media activities on the level of blood donated.

■ TC13

Room W330

Marketing and the C-Suite

Contributed Session

Chair: Kissan Joseph, Professor, University of Kansas, 345 H Summerfield Hall, 1300 Sunnyside Avenue, Lawrence, KS, 66045, United States of America, kjoseph@ku.edu

1 - Value-enhancing Roles of Marketing Executives: Evidence from Analysts' Forecasts

MinChung Kim, Hong Kong Polytechnic University, 8F Li Ka Shing Tower, Hong Kong, Hong Kong - PRC, minchung.kim@polyu.edu.hk, Leigh McAlister, Woo-jong Lee

The paper examines the implications of having a marketing executive (i.e., Chief Marketing Officer) on a firm's top management team (TMT). Contrary to Nath and Mahajan (2008), we find that Chief Marketing Officer (CMO) does increase firm value across firms with a larger set of observations. The paper argues that CMO does this by leading market orientation which increases information the firm have available to share with financial analysts. By more and better informing analysts, CMO enhances the firm's benefit from each additional analyst that is attracted and from more accurate analysts' earnings forecasts. CMO also contributes to the value of the firm by explaining to TMT that it is a mistake to do myopic management and also by helping TMT understand how they can do the least possible damage if TMT has to do myopic marketing management (i.e., less penalty for marketing myopia when that behavior has to be done.)

2 - The Firm Performance Outcomes of Top Management Team Marketing Attention

Stefan Worm, Assistant Professor, HEC Paris, 1 Rue de la Liberation, Jouy-end-Josas, 78351, France, worm@hec.edu, Rajendra Srivastava, Sundar Bharadwaj, Jialie Shen

Marketers firmly believe that they should be in the firm's driver's seat, but in reality the attention paid to marketing issues in the boardroom is fairly limited. This paper explores the mechanisms through which top management team (TMT) marketing attention affects firm performance outcomes. In this pursuit, we compile a unique panel data set combining text analysis-based measures of TMT attention with consumer brand ratings, innovativeness measures, and financial performance. The study first develops and validates a higher-order measure of TMT marketing attention using a novel statistical textual analysis framework based on a machine-learning algorithm. Next we examine how TMT attention affects non-financial (e.g., brand perceptions and innovation) and financial performance (e.g., firm value and risk). Then we investigate how these outcomes are contingent on firm-specific and industry-level factors.

3 - The Impact of Intellectual Capital and Intellectual Capital Management Capability on Firm Value

Jing Yang, Emmanuel College, 400 The Fenway, Boston, MA, 02115, United States of America, yangj@emmanuel.edu

Building upon the marketing literature of brand equity, marketing-finance interface, strategy literature regarding intellectual capital, and resource-based theories, this research develops a conceptual framework which links various assets, capabilities and firm value. This research studies three types of market-based assets and capability: brand equity, intellectual capital and intellectual capital management capability. Brand equity is "the incremental cash flow resulting from the product with the brand name compared with that which would result without the brand name" (Ailawadi et al. 2003, pp.1, Stahl et al. 2012). It is a major element of intangible off balance-sheet assets. Intellectual capital is broadly conceptualized as knowledge resources that organizations use for competitive advantage (Youndt et al. 2004, Zhao and Chadwick 2013). It is a multi-dimensional construct, consisting of different components, such as human capital, organizational capital and customer capital. The amount of intellectual capital is positively associated with firm profit margin, return on assets and return on investment. Intellectual capital management capability is defined as the efficiency of investing in knowledge management activities to create organizational knowledge. A good intellectual capital management capability enables firms to efficiently utilize the individual knowledge and facilitates knowledge exchange and utilization (Subramanism and Youndt 2005, Chang et al. 2013). Various statistical techniques were used to measure the constructs in the research model, such as Data Envelopment Analysis, Structural Equation Modeling and factor explanatory financial model. Stock return response modeling was used to test the research hypotheses. On the basis of a sample of US semiconductor companies, this study shows that intellectual capital and intellectual capital management capability are associated with firm value, while brand equity moderates the relationships.

4 - MBAs in the C-Suite: When Do They Add Value and Are They Priced Correctly?

Kissan Joseph, Professor, University of Kansas, 345 H Summerfield Hall, 1300 Sunnyside Avenue, Lawrence, KS, 66045, United States of America, kjoseph@ku.edu, Minghui Ma, Jide Wintoki

The MBA is a very popular degree, with approximately 175,000 degrees awarded in the US every year. Moreover, the MBA is generally considered to be the gold standard in management education. Curiously, despite these positive assessments, academic research on the value of an MBA is scant and surprisingly devoid of strong associations. Bhagat, Bolton, and Subramanian (2010), for example, analyze the attainment of the MBA degree among CEOs and conclude that "there is no systematic relationship between CEO education and firm performance." In contrast, other research clearly demonstrates the value of specialized education: Chaudhuri, Ivkovic, Pollet, and Trzcinka (2013) find that institutional money management companies that employ Ph.D. qualified managers generate superior returns. Given these mixed results, we advance the hypothesis that the value of an MBA degree is heightened in those environments in which complex strategies have to be conceptualized and implemented (low task programmability). We test this premise empirically by examining the specific business function of marketing since the utilization or non-utilization of intangible investments like advertising can effectively proxy for the extent of task programmability inherent in the marketing function. We find that among firms that utilize advertising, the attainment of the MBA degree by a top executive with marketing responsibility generates abnormal risk-adjusted returns of approximately 3%, yields more earnings surprises, and contributes to enhanced ROA. Notably, such effects are absent among firms that do not employ advertising. These effects are also absent for MBA attainment by CEOs and other top management team members.

■ TC14

Room W100

Advances in Choice Models III

Contributed Session

Chair: Peter Stüttgen, Carnegie Mellon University, Pittsburgh, PA, United States of America, pstuettg@andrew.cmu.edu

1 - What to Click, When to Stop, and What to Buy: A Model of Information Processing and Choice at an E-commerce

Timothy Gilbride, Associate Professor, University of Notre Dame, 399 Mendoza College of Business, Notre Dame, IN, 46556, United States of America, tgilbrid@nd.edu, Imran Currim, Ofer Mintz, S. Siddarth

Many websites organize product-attribute information in the matrix form reminiscent of information display boards widely employed in lab-based information processing research. Our study analyzes a unique dataset collected at a popular manufacturer's retail website wherein product-attribute information in matrix form was hidden and potential buyers visiting the website sequentially decided on which cells to click on to reveal information, when to stop clicking, and what, if anything, to buy. We propose and estimate a continuum of models of these decisions in order to obtain estimates of consumers' attribute preferences. Two sets of models are based on well-established but separate information processing traditions, i.e., utility and behavioral, while a third set is a hybrid combination of these two approaches. The hybrid models are found to perform the best, yielding the highest in-sample and out-of-sample fit statistics and correctly signed parameter estimates of consumer attribute preferences. Given the relative ease with which firms can collect this type of data as a by-product of regular web operations, this research shows that the proposed methodology is a potentially attractive way for firms to understand consumer preferences on an ongoing basis.

2 - Estimating Brand Choice Elasticities with Customer Level Data vs. Household Level Data: Does it Matter?

Parneet Pahwa, Doctoral Student, University of Texas at Dallas, Richardson, TX, United States of America, pxp030100@utdallas.edu

Much of the extant empirical work related to brand choice uses household level choice behavior to estimate price elasticities. Using a unique data set which contains choices made by the household and members within the household, we ask how different are the price elasticities when estimated using customer level choices relative to those estimated from household level choices? Based on the analysis of choice behavior in two categories we find that the estimates obtained from customer level choices are significantly different from those obtained from household level choices. Our analysis reveals that households with a single dominant shopper tend to exhibit higher price elasticities relative to households where the household members split the shopping trips evenly. For retailers interested in targeting price sensitive households we show that segmentation based on estimates of household level price elasticities may result in mis-targeting as households with a dominant shopper who are quite price sensitive may not be viewed as such based on household level estimates.

3 - Utility and Attention - A Structural Model of Consideration

Keyvan Dehmamy, Goethe University - Frankfurt, Grüeneburgplatz 1, Frankfurt/Main, 60323, Germany, dehmamy@wiwi.uni-frankfurt.de, Thomas Otter

Models of consumer decision making often condition on attention to the different offers or alternatives to choose from. However, in many environments offers not only compete through their utility but also for the attention of decision makers. In this case, it is important to distinguish between attention and utility – it makes a difference whether an offering is overlooked, or rejected conditional on awareness – for optimal marketing control and empirical measures of competition. We show how quantity choices, in contrast to multinomial choices, facilitate the empirical distinction between attention and utility. In our illustrative application we analyze choices from simulated store shelves. We find that the number of facings of a brand on the shelf influence attention but not utility from the brand. Equipped with this exclusion restriction, we formulate a parametric model that identifies attention based considerations sets. We find overwhelming support for this model compared to a model that ignores attention and motivates choices from utility only.

4 - Maximizing vs. Satisficing: How Do Consumers Choose?

Peter Stüttgen, Carnegie Mellon University, Pittsburgh, PA, United States of America, pstuettg@andrew.cmu.edu, Peter Boatwright

This paper adds to the debate on whether consumers are in fact utility maximizers or satisficers by estimating two structurally comparable models on the same data set containing eye-tracking search data and choice data from a conjoint design. Based on Stüttgen et al.'s (2012) satisficing model, we develop a similar model based on the utility maximizing framework. Both models not only model final choice, but also the information acquisition process. This is the first model to incorporate the interdependence between evaluation and search in a maximizing framework. The models are compared using Bayes Factors on the individual level in order to determine which one better fits the decision making process. The results shed light on people's search and decision rules, thereby helping in furthering our understanding of consumer decision making.

■ TC15

Room W130

Consumer Behavior: Perceptions & Risk

Contributed Session

Chair: Tanuka Ghoshal, Assistant Professor, Indian School of Business, Indian School of Business, Gachibowli, Hyderabad, 500032, India, tanuka_ghoshal@isb.edu

1 - The Impact of Measuring Risk Attitudes on Risky Decision Making Behavior

Dipankar Chakravarti, Johns Hopkins University, Carey Business School, Baltimore, MD, United States of America, dipankar.chakravarti@jhu.edu, Stephen Amatucci

A variety of different approaches and measurement scales are commonly used to assess consumer risk attitudes (or risk tolerance) in order to guide their financial decisions. We use a set of controlled experiments to examine the possibility that rather than simply measuring risk orientation, such assessment may actually alter consumers' risk attitudes. Such changes, stemming from mere measurement, may influence how the target consumers behave in subsequent risky decision contexts. Specifically, participants in an online panel completed one of three variants of a commonly used financial risk tolerance assessment scale (Grable and Lytton 1999). In one condition, participants were presented the questionnaire in its unmodified form. In a second (third) condition participants saw a variant of the questionnaire with the items modified to prime risk aversion (seeking) responses. Participants in a control condition did not answer the risk attitude questions, but completed a general survey of equal length. Following the assessment, subjects in each condition completed a set of risky decision tasks. These included common risky choices and decisions embedded in a well-known domain-specific risk scale (Weber, Blais, and Betz 2002). The findings show how the risk assessment process influenced participants' subsequent risky decisions. We discuss the theoretical implications of such malleable risk attitudes and how such "mere-measurement" effects may be mitigated in consumer financial decisions.

2 - Home-buying Risk Judgments

Ozgun Atasoy, Boston University School of Management, 595 Commonwealth Avenue, Boston, MA, 02215, United States of America, ozgun@bu.edu, Patrick Kaufmann, Remi Trudel

Buying a home contains serious financial risks for the homeowner. In three experiments, we show that people tend to underestimate the risks of home-buying, and this underestimation is likely the result of the mental associations that the idea of homes trigger. Experiment 1 shows that buying a home is erroneously considered as less risky than investing in a well-diversified portfolio of assets, i.e., an index fund. Experiment 2 shows that while people believe that diversification reduces risk when stocks are concerned, they believe that diversification, via investing in a portfolio of homes, increases risk when homes are concerned. A diversified portfolio of homes no longer feels tangible and loses the mental associations that a home has. Experiment 3 shows that people tend to pick a home as the safe investment option given a choice between a home and a diversified portfolio of homes. Given the huge importance of homes in household finance and the national economy, the existence of a systematic underestimation of risk, as this research suggests, implies that we need to rethink how the market for homes operate.

3 - The Effect of Personal Appearance on Sales Representative Perception and Selection: An Experimental Study

Larry Garber, Associate Professor, Elon University, Campus Box 2075, Elon, NC, 27266, United States of America, lgarber@elon.edu, Michael Dotson, Earl Honeycutt

We test the effects of personal appearance on client perception and selection of realtors. One hundred sixty-three subjects with prior house-buying experience evaluated respective sets of female and male realtors, represented by their website photos, on twenty sales rep attributes, and indicated their preferences for them. Correspondence analysis was used to generate perceptual maps and the realtors were located as points in sales representative attribute space. Those attributes that most differentiated realtors for both male and female realtor sets, based on their appearance, were "enthusiastic," "creative," "trustworthy," and "strong," indicating that the structure of the perceptual spaces generated for male and female realtors were essentially the same, and were the same for both female and male home buyers. Using prefmap to overlay preference vectors on these perceptual spaces, we find that, on average, both male and female home buyers most prefer those female realtors who are relatively enthusiastic and creative, and prefer those male realtors who are relatively enthusiastic and trustworthy. A prior exploratory study (Garber, Dotson and Honeycutt 2013) calibrated those appearance aspects represented by each of the realtor photos used as stimuli for the current study, and determined which of these most differentiated realtors by appearance. A series of regressions will be used to test the relative effects of aspects of appearance on each of the twenty sales rep attributes, and on overall preference. Results will be reported. Theoretical and managerial implications will be discussed.

4 - Investigating the Psychological Underpinnings of the Fair Skin Bias in the Indian Subcontinent

Tanuka Ghoshal, Assistant Professor, Indian School of Business, Indian School of Business, Gachibowli, Hyderabad, 500032, India, tanuka_ghoshal@isb.edu

Overwhelming anecdotal evidence, a burgeoning market for fairness creams for women and men, along with their controversial advertising, bear testament to the desirability and perceived superiority of light or "fair" skin in India. We systematically examine whether there is an advantage for fair skinned individuals in the mating and employment markets through a combination of methods including analysis of Indian history, mythology, cultural products (music and movies), content analysis of matrimonial postings and lab experiments. The questions we ask include: Are lighter-skinned potential mates perceived to be more attractive? Do lighter-skinned job applicants have an advantage over their darker skinned counterparts? Are there gender differences? We investigate the psychological underpinnings for the fair skin bias, and propose an explanation rooted in evolutionary psychology. Evolutionary psychologists predict an enhanced striving in men for resource acquisition, and in women for physical attractiveness and youth. Content analysis of matrimonial postings, and the results of our lab experiment suggest that in a mating context men find a fair-skinned female profile to be more attractive, and are more likely to consider them for a relationship. However, among women, fair skin only appears to provide an advantage to a less attractive male profile. In an employment context, fair skin is perceived to have higher associations with power, competence, earning potential, and likelihood of hiring, which could be a throwback to India's historical past of lighter-skinned invaders and the caste system. We are currently investigating the extent to which the fair-skin bias is implicit or nonconscious.

■ TC16

Room W320

Human Brands

Contributed Session

Chair: Mayukh Dass, Associate Professor, Texas Tech University, Rawls College of Business, Lubbock, TX, United States of America, mayukh.dass@ttu.edu

1 - What's in the Credit? An Investigation of Structural Influence on Career Success in Motion Pictures

Kitty Wang, Assistant Professor of Marketing, City University of Hong Kong, City University of Hong Kong, Marketing Department, Kowloon, Hong Kong - PRC, kitty.wang@cityu.edu.hk, Liyuan Wei, Hailiang Chen

Do actors succeed because they are given the opportunity to work on larger parts to show off their acting ability, or because they are given more visibility when receiving credits? This project studies the effect of different factors on movie actors' career success. Specifically, we explore the possible race between actors' 'face time' and their 'brand visibility' in driving their future career advancements. To do so, we collect a novel dataset over the span of 20 years that contains information on the actors in the opening and closing credits of a movie, and the actual face-time the actors received. Because of the nature of this quasi-panel dataset, we are able to observe the career development of a set of actors over the years. We develop an empirical strategy that accounts for potential endogeneity issue arising from movie crediting, and other factors that may also affect an actor's future career success (such as intrinsic quality, performance in a particular movie, current popularity, etc.). This project helps us understand if the synthetic structure of movie crediting adds value to an actor, and contributes to their future success.

2 - Young Consumer's Emotional Responses to Televised Political Advertisements

Andrew Hughes, Lecturer, Australian National University, RSM, ANU, Acton, 0200, Australia, andrew.hughes@anu.edu.au

Political advertising is a unique subset of advertising (Lang 1991), and has grown in use, technique and cost every year that it has been in existence. In the 2012 US Presidential election over $US1 billion was spent on television advertising, of which two thirds was negative (Fowler, Franz and Ridout 2013). This research tests which message valence (negative/positive) has a stronger emotional arousal when it is combined with the use of a structural element which can increase arousal, in this case message pace (Lang 1991). A young adult cohort was exposed to a randomised sequence of television messages from across a political spectrum to explore variation in emotional responses based on message valence and pace. Responses to the advertising were captured using the Geneva Emotion Wheel (GEW) and Self-Assessment Mannequin (SAM). The SAM measures immediate primary emotional responses and the GEW both primary and cognitive emotional responses to the advertising stimulus. Findings demonstrate that increases in pace induce stronger negative emotional responses to negative advertising messages when compared to other changes in pace. The results also found that the inverse approach – slower, positive advertising, demonstrated higher levels of positive emotional responses. Findings also indicate that despite anecdotal statements of young voter apathy, slow positive and fast negative messages result in demonstrable changes to viewer emotional states which are a necessary precursor to voter attitude change and engagement.

3 - Performance Premiums and Advertising: An Application to Human Brands in Political Races

David Schweidel, Associate Professor of Marketing, Emory University, 1300 Clifton Rd. NE, Atlanta, GA, 30322, United States of America, dschweidel@emory.edu, Mike Lewis, Beth Fossen

Human brands, including movie stars, athletes, and politicians are playing an increasingly important role in marketing activities; yet, fundamental questions in human brands research concerning brand value and its relationship with marketing mix activities remain unanswered. This research extends premium-based brand valuation methods to the human brand context by presenting a performance premium assessment of the strength of human brands and exploring the relationship between human brand strength and advertising. We develop a joint hierarchical Bayesian model of brand performance and marketing activity to achieve these objectives. Contributing to the growing body of literature on political marketing, we estimate our model using data on the election performance and advertising expenditures of political candidates from recent U.S. House of Representatives elections. Our findings suggest that, while individuals who possess a strong human brand perform better than expected, competitive advertising by their opponents has a stronger negative impact on their performance compared to the effect of competitive advertising against weaker human brands. We discuss the implications of our findings for political advertising, as well as the implications for marketing human brands in other contexts.

4 - Determinants and Dynamics of Auction Value of Contemporary Artist Brands

Mayukh Dass, Associate Professor, Texas Tech University, Rawls College of Business, Lubbock, TX, United States of America, mayukh.dass@ttu.edu, Srinivas Reddy, Divya Keshamoni

Over $1.39 billion of fine art by contemporary artists was sold during the 2012/2013. The value of the top 100 artists was $935M. Historic dominance of western artists in top 100 is being replaced by artists from emerging markets like China and India. For example, 8 of the top 20 contemporary artists in 2012/13 are from China and India (Arprice 2013). We treat artists as brands (Schroeder 2006), and using a unique data set of auction records of 1373 artists over 1998-2008, we explore the dynamics and determinants of auction value of these brands. Specifically, we explore the role of country specific determinants such as economic, wealth, and cultural factors on the valuation of artist brands. We use Functional data analysis to compare the velocity and acceleration of the artist brands across 57 countries. The movement of value and the dynamics of entry and exit of the artists from the top 100 list presents an interesting way to understand the micro and macro influences of these country specific determinants.

Thursday, 3:30pm - 5:00pm

■ TD01

Room E130 (Aud.)

Allocating Marketing Resources

Contributed Session

Chair: Dominique Hanssens, Professor, University of California, Los Angeles, Anderson School of Management, 110 Westwood Plaza, Los Angeles, CA, 90095, United States of America, dominique.hanssens@anderson.ucla.edu

1 - Impact of Market Sophistication on Firm's Willingness to Invest for the Future

Sue Ryung Chang, Assistant Professor in Marketing, University of Georgia, Terry College of Business, Athens, GA, United States of America, suechang@uga.edu, Sundar Bharadwaj, Omar Rodriguez-Vila

Budget allocation across advertising, promotion, and R&D is one of the most complex decisions for marketing managers. In a competitive and evolving environment, marketing managers need to allocate their budgets wisely to secure both short-term and long-term returns for the firm. Depending on the firm's business context and market structure, its willingness to invest in the future may change. Prior literature recognizes the heterogeneity in marketing budget allocation across different firms. However, the heterogeneity in marketing decisions across country-markets and the conditions influencing the firm's willingness to invest in its future remains under-researched. In this study, the authors propose and test a conceptual framework based on the impact of market structure on marketing decisions to understand the conditions that strengthen or weaken the willingness of managers to invest in the future. Specifically, this study focuses on how market sophistication influences a firm's marketing budget allocation and product launch decisions. The authors investigate three aspects of market sophistication: competition, retail channel, and media channel. Based on a nine-year panel dataset of marketing expenditure from 34 countries in Europe, America, Asia, and Africa, the authors find general support for the impact of market sophistication on budget allocation toward advertising or innovation intensity as opposed to short-term promotion. They also find that firm conditions such as brand maturity and the number of brands moderate the impact of market sophistication on firms' investment for the future. The results provide insights into factors influencing the ability of managers to balance short vs. long term investments.

2 - Modeling Optimal Marketing Resource Allocation using Time-varying Effects

Alok Saboo, Georgia State University, 35 Broad St., Atlanta, GA, 30303, United States of America, asaboo@gsu.edu, V. Kumar, Insu Park

Marketing resource allocation has been a topic of intense scrutiny, yet the literature on the topic has largely overlooked the fact that effectiveness of marketing mix elements vary over time. In this paper, we address this gap and argue that marketing mix effectiveness varies with the evolution of consumer-brand relationship and explicitly model these temporal variations using a time-varying effects model (TVEM). We combine customer transaction data from a Fortune 500 national retailer over a four year period with demographic information obtained from Acxiom Corp for over a quarter million customers to test our framework. Results from our TVEM analysis that accounts for (1) self-selection of customers into receiving marketing communication and (2) endogeneity of the number of such communications received by customers provide strong support for our framework. We find that the influence of marketing mailers, other transaction characteristics (e.g., coupon redemption, returns, cross-buy), and demographic factors (e.g., age, income, household size, interests) on sales vary significantly over the customer-life cycle and ignoring such temporal variations can lead to gross misallocation of marketing investments. Specifically, our results suggest that firms can increase their revenues by over 17% without any additional expenditure by allocating resources based on the proposed TVEM framework. To facilitate adoption, we provide implementation guidance and actionable insights to help managers implement the proposed framework.

3 - CEOs' Optimistic Overconfidence, Marketing Resource Allocations and Performance

Nithya Shankar, Rensselaer Polytechnic Institute, 110 8th Street, Troy, NY, 12180, United States of America, shankn@rpi.edu, Dmitri Markovitch, Dongling Huang

Recent research in financial economics shows that CEOs' optimistic overconfidence, or above-average belief in own abilities to generate superior performance, can account for important differences in investment strategies, such as acquisitions. Furthermore, the marketing literature finds that variations in firm resource allocations towards research and development relative to advertising impact firm financial performance. Surprisingly, the role of decision-makers' characteristics and biases in marketing resource allocation decisions is not well understood. In response, the current study investigates the impact of CEOs' optimistic overconfidence on firm resource allocations towards marketing or R&D in the face of resource constraints and examines those allocations' impact on several measures of marketing performance. We categorize CEOs as optimistically overconfident if they persistently fail to reduce their exposure to company-specific risk in their personal investment portfolio. We find that optimistically overconfident CEOs tend to allocate a greater proportion of firm resources towards R&D. We also find that optimistically overconfident CEOs are associated with higher firm valuation and sales growth.

4 - Growth Spurts and Marketing Spending

Fang Wang, Associate Professor, Wilfrid Laurier University, School of Business and Economics, Waterloo, ON, N2L 3C5, Canada, fwang@wlu.ca, Xiao-Ping Zhang, Dominique Hanssens

Marketing executives are under pressure to produce revenue and profit growth for their brands. In most cases that involves requesting gradually higher marketing budgets, which is expensive, especially considering the known diminishing return effects of marketing. However, in reality, brands tend to grow in spurts, i.e. short periods of sales evolution alternating with longer periods of stability. We use the Wang-Zhang (2008) time-series test to identify such growth-spurt periods and relate them to exogenous events such as positive product reviews, which create a temporarily more benevolent environment for the brand. We then explore how vigilant marketing can take advantage of such periods to turn temporary sales growth into more sustained growth, at considerably lower cost to the brand relative to traditional percent-of-sales decision rules. We also derive the implications of such opportunistic spending for marketing budget setting. Our empirical illustration is based on several brands in the digital single-lens reflex (DSLR) camera market.

■ TD02

Room E208

Game Theory in Marketing

Cluster: Special Sessions

Invited Session

Chair: Jeffrey Shulman, University of Washington, Michael G. Foster School of Business, Seattle, WA, United States of America, jshulman@uw.edu

1 - Economics of Compliments

Jeffrey Shulman, University of Washington, Michael G. Foster School of Business, Seattle, WA, United States of America, jshulman@uw.edu

Salespersons give compliments to clients. Academics give compliments to other individuals in the field. Employees in a company give compliments to peers and superiors. This research develops an analytical model to identify conditions for which giving a compliment to someone can serve as a signal of unobservable quality. What a person learns about the sender of a compliment depends on the receiver's own stature. For instance, the research shows that high quality senders can signal their quality by complimenting low quality receivers. High quality senders can also indicate their quality by abstaining from complimenting high quality receivers. In total, the research identifies the quality of the receiver, the probability of getting noticed without a compliment, and the cost of a compliment as three main drivers of the equilibrium beliefs of sender quality by the receiver of a compliment.

2 - Policy and Inference: The Case of Product Labeling

Juanjuan Zhang, Massachusetts Institute of Technology, Cambridge, MA, United States of America, jjzhang@mit.edu

Consumers may infer a policy maker's private information about relevant economic variables from its policy choice. I study this inference effect and its policy implications in the context of mandatory product content disclosure. I find that mandatory disclosure does not always benefit consumers. For example, by observing the government's requirement to label genetically modified organisms (GMOs) in food products, consumers may infer that GMO safety is of enough concern, which leads to insufficient consumption. On the other hand, the lack of mandatory disclosure may send a falsely optimistic signal of GMO safety to consumers, which leads to excessive consumption. Optimal disclosure policy should take into account both the transparency of product content and consumer inference of content quality. Interestingly, higher disclosure implementation cost may broaden the scope of mandatory disclosure and may even increase social welfare. An experiment shows that emphasizing GMO disclosure does worsen consumers' perception of GMO safety.

3 - Bidding Costs and "Broad Match" in Sponsored Search Advertising

Kinshuk Jerath, Columbia University, New York, NY, United States of America, kj2323@columbia.edu, Wilfred Amaldoss, Amin Sayedi

In sponsored search advertising, choosing the keywords to bid on, and deciding how much to bid on them, is a complex task that leads to "bidding costs." To increase advertisers' participation in the auctions by reducing these bidding costs, search engines offer a tool called broad match in which the search engine bids on the advertisers' behalf. However, broad match bids may be less accurate because they are based on the search engine's estimates of the advertisers' valuations. We analyze the strategic role of bidding costs, and of broad match, in search advertising. One expects broad match to lower advertisers' bidding costs and thereby improve their profits. At moderate levels of bid accuracy, however, broad match creates a "prisoners' dilemma"—individual advertisers find it attractive to use broad match, but when many advertisers adopt it, the resulting increased competition hurts advertisers' profits. Next, even though broad match increases the search engine's revenue, we find that the search engine will increase broad match accuracy only up to the point where advertisers choose broad match; increasing the accuracy any further reduces the search engine's profits. We further extend the model to consider asymmetric advertisers, multiple advertisers, asymmetric keywords and bid manipulation.

■ TD03

Room E204

Public Sector Marketing and Health Sciences

Contributed Session

Chair: Gurumurthy Kalyanaram, Professor, International University of Japan and CUNY, 1982 2nd Avenue, # 3C, New York, NY, 10029, United States of America, kalyan@alum.mit.edu

1 - Predicting Lung Cancer Deaths for Providing Guidance to Governments and Related Industries

Kyunghoon Kim, KAIST Business School, 85 Hoegiro Dongdaemoon-gu, Seoul, Korea, Republic of, kyunghoon.kim.87@gmail.com, Duk Bin Jun

This study proposes a proportional hazard model with unobserved heterogeneity to examine factors that account for individual survival times – the number of years a man had before he died or censoring occurred – and calculate the number of annual deaths. We applied diagnosis records of patients who have lung and bronchus cancer, the most common cancer in the United States. The result shows that a cohort (diagnosed year) variable significantly affects individual survival times as well as several variables such as age, gender, race, registry, and stage of tumor progression. Furthermore, from segmenting the whole patients into several groups as of age, gender, and race, we observe their survival probabilities within a given period vary from group to group. Using the estimated individual survival probability in each year, we derive annual deaths caused of the cancer, which in accordance with annual deaths in reality. We expect that our study can shed lights on both public and private sectors. For public sector, the results can contribute to allocate the government's health and welfare budget in a more precise way. In case of private sector, for example, our segmentation results can provide guidance to the insurance industry to target customers more specifically as well as to predict the accurate demands of cancer insurance products.

2 - Privacy Attitudes and their Effects

Ron Larson, Associate Professor, Western Michigan University, 1903 West Michigan Ave, Haworth College of Business, Kalamazoo, MI, 49008, United States of America, ron.larson@wmich.edu, Kate Verbrugge

Privacy remains a particularly difficult concept to define. Researchers often ask a series of privacy attitude questions and use factor analysis to measure different dimensions of the concept. Each dimension may have unique effects on respondent behavior. Several different privacy scales have been proposed. In 2006, a random sample of adults in the Midwest was surveyed by mail on their privacy attitudes and their behaviors that had privacy implications. Statements from several scales were used to create thirteen privacy attitude questions. The eight behaviors in the analysis could either raise or lower risks to privacy (e.g., using a credit card or using a paper shredder). The survey was sent to another sample of adults in the Midwest during 2010. Comparing the two surveys, two of the three privacy factors derived from attitude responses differed and some relationships for explaining the respondent behaviors changed. This suggests that considerable fluidity may exist with how people think about privacy and with what may influence them to act (or not act) on their concerns. More research may be needed on the privacy scales, on the structure or dimensions of privacy, and on what may influence privacy attitudes and behaviors.

3 - Evaluation of Public Goods

Gurumurthy Kalyanaram, Professor, International University of Japan and CUNY, 1982 2nd Avenue, # 3C, New York, NY, 10029, United States of America, kalyan@alum.mit.edu

Using a Random Parameter Logit Model (RPL), this paper examines the demand for public goods and services. A method was introduced to empirically capture ethical preferences with a proxy variable using survey data. We collect data using Revealed Preference (RP) survey methodology, and we calibrate the statistical model with a Random Parameters Logit (RPL) approach. The RPL approach provides for robust and reliable estimates, and accounts for heterogeneity. The RPL modeling approach relaxes the assumption of IID errors, and allows all unobserved components of utility to predict bid choice. Using this approach we are able to model unobserved heterogeneity, as opposed to assuming it to be a constant and treating it as a nuisance. Also, by allowing variance to be free over individuals we are able to examine whether the distribution of a parameter varies from one data point to another point to statistically significantly explain tract choice. Essentially, the model allows the variance of the response distribution, as well as the means, to predict individual choice. We find that ethical preference is indeed an explanatory variable for nonmarket valuation, and it must be included in empirical analyses. If ethical proxies are not included, then the given parameters will be biased and inconsistent due to the omitted variable. In our illustration, stated ethical views were found to be an empirically significant determinant of the visitation demand to urban parks.

■ TD04

Room E201

Online Retailing & Multichannel Marketing

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Richard Briesch, Associate Professor, Southern Methodist University, 3323 Mockingbird Lane, Dallas, TX, 75205, United States of America, rbriesch@smu.edu

1 - The Hare and the Tortoise: Do Early Adopters of Online Channels Purchase More?

Umut Konus, Assistant Professor, University of Amsterdam, Plantage Muidergracht 12, 1018TV, Amsterdam, Netherlands, u.konus@uva.nl, Jing Li, Koen Pauwels, Fred Langerak

Identifying valuable customers across channels and understanding how buying behavior evolves over time are crucial for multichannel firms. Early adopters of a product or service tend to be more valuable than late adopters. Does this assumption apply to early adopters of new online channels too? This study uses a finite mixture model with time dimension to simultaneously segment customers on the basis of their responses to a newly introduced online channel and investigate the effects of online channel adoption on the subsequent customer purchases. We use two databases to examine and validate our model in different categories and settings. First database covers 12 years of transactions at a French retailer of natural health products, whereas second database covers 10 years of transactions from a consumer electronics chain from US. Preliminary results suggest that contrary to the common wisdom, earliest online channel adopters are not the customers who purchase in highest amounts and with the greatest frequency from online purchase channels. We offer implications for further research and practice.

2 - The Success of Multichannel Strategies: Testing a Contingency Framework

Julia Beckmann, University of Augsburg, Alter Postweg 101, Augsburg, 86159, Germany, julia.beckmann@wiwi.uni-augsburg.de, Michael Paul

It is not clear whether selling products through multiple channels is a promising strategy. Multichannel retailers are often expected to be more successful than single-channel firms (Ansari, Mela, and Neslin 2008), but research results are inconsistent. Thus, it seems crucial to better understand the mechanisms and conditions in which channel strategies lead to higher firm performance, rather than saying that a multichannel strategy in general is more or less successful. We propose a comprehensive contingency framework which demonstrates when multichannel strategies are recommendable and use Ohmae's (1991) strategic triangle theory to identify moderators related to the company (i.e., brand equity, business strategy, product category), competitors (i.e., competitors' multichannel strategy), and customers (i.e., market dynamism, purchase frequency). We empirically test our model by analyzing data on 191 publicly traded US-retailers using time series cross-sectional analysis (Beck and Katz 1995). We collected data of these retail firms for a time period from 1994 to 2012 by analyzing multiple data sources (e.g., OMPUSTAT, annual reports, press). Our results confirm that the success of conducting a multichannel strategy is dependent on several conditions, instead of being more successful per se. For instance, we find that the number and types of distribution channels provided need to fit with a firm's general business strategy. Our study is the first to test a comprehensive model of the contingencies of successful multichannel strategies. Managers should use our model as a basis for their decision making when introducing additional channels and designing their multichannel strategy.

3 - Managing Expectations – Understanding and Influencing Product Returns in Online Retailing

Niklas Hellemann, RWTH Aachen University, Kackertstr. 7, Aachen, 52072, Germany, hellemann.niklas@gmail.com

Despite experiencing unrivaled sales growth, online retailing companies face cutbacks in profits through extensive product return rates. However, key questions in this area remain unanswered. What factors drive customers to return merchandise purchased online? How does their behavior on the path-to-purchase affect returns? Can online retailers adjust their websites to impact return behavior? Accordingly, we develop an integrated conceptual model of product returns, connecting research in product return behavior to customer satisfaction and cognition theory. We argue that specificity and value of expectations towards product quality can in fact influence satisfaction and returns. Drawing on findings from persuasion research, we furthermore propose that increased elaboration during the purchase process leads to more specific and realistic expectations and, therefore, decreased product returns. Additionally, we discuss the influence of customer-related variables (e.g. shopping motives) and website characteristics on elaboration and expectation formation. Ultimately, we suggest that website stimuli may be employed to increase the value and specificity of expectations by, for instance, providing more product information, utilizing methods of visual merchandising, or stimulating elaboration through directly challenging product choices. By doing so, we expand knowledge in product return research in two ways: On the one hand, we are – to the best of our knowledge – the first to develop a psychological process model of return behavior. On the other hand, we develop a conceptual framework to enable researchers to investigate the direct influence of website stimuli on product returns.

4 - Multichannel Choice: Managing Assortment, Condition, and Price

Richard Briesch, Associate Professor, Southern Methodist University, 3323 Mockingbird Lane, Dallas, TX, 75205, United States of America, rbriesch@smu.edu, Sandy Jap, Jaquelyn Thomas

We examine how variance in a product's condition, channel assortment and prices influence a business customer's channel choice across three formats: physical, digital, and a hybrid of the two. Interestingly, we find that for markets for products of varying condition channel assortment and condition is more influential in channel choice than product pricing, and that their effects are curvilinear, suggesting that channel assortments and product condition offerings are subject to diminishing returns.

■ TD05

Room E231

Internet & Interactive Marketing IV

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Christian Schulze, Assistant Professor, Frankfurt School of Finance & Management, Sonnemannstr. 9-11, Frankfurt, 60314, Germany, email@christian-schulze.de

1 - Sequential Allocation for Customer Acquisition

L. Katie Yang, University of Pennsylvania, 3730 Walnut Street, 700 Jon M. Huntsman Hall, Philadelphia, PA, 19104, United States of America, yangkl@wharton.upenn.edu, Eric Schwartz, Peter Fader

Firms routinely use different kinds of policies to allocate their acquisition efforts (e.g., advertising dollars, sales calls, etc.) across a set of well-defined customer channels or segments, and they do so on a repeated basis (e.g., every week). How should a firm sequentially allocate its acquisition budget across segments to maximize customer profitability over time? To answer this fundamental question, we examine a set of common acquisition policies – and some new ones – and evaluate their capabilities in identifying the "right" customers according to short- and long-run profitability measurements. Beyond the typical policies, which all tend to be "backward-looking" (i.e., defining the attractiveness of a segment based purely on observed outcomes), we introduce several "forward-looking" tactics, which utilize forecasts of behavior and profitability for each segment when making allocation decisions. To predict customer behavior and achieve the objective of balancing "earning" and "learning" over time, we develop a partially pooled Pareto/NBD model to assess the attractiveness of each customer segment in a forward-looking manner. Once we arrive at our estimates of relative segment value, we perform our sequential allocation using "multi-armed bandit" algorithms to govern earning/learning tradeoff for the allocations each period, while constantly updating our beliefs about segment value as we gain more data from the acquired customers throughout. Finally, using classification techniques from machine learning, we provide a decision tree that recommends when to use which acquisition policy based on easy-to-compute summaries of just-acquired customers' behavior. Our preliminary results show that the forward-looking policies can significantly improve the profitability of the customer base compared with other, shorter horizon, policies that are used in marketing practice.

2 - Funneling or Wandering? The Impact of Navigation Patterns and Amount on Shopping Site Visits

Hyun Gyo Kim, Researcher, Distribution and Franchise Research Center, Sejong Univ., 209 Neugdong-ro,Gwangjn-Gu, Seoul, Korea, Republic of, khg423@gmail.com, Dong Il Lee, Hyejun Lee, Sangman Han, Kyoungsik Cho

The customer was a patron of the shopping street while the other customer was not familiar with this shopping street. Who was the customer who had entered the store in this street? Previous clickstream researches did not consider customers' shopping familiarity or expertise. This research considers not only navigation patterns, but online and mobile familiarity as a moderator. Also, the customers utilize multiple media to buy products in e-commerce, such as online, and mobile. However, previous clickstream research did not consider these activities, so that the understanding of multiple media navigation in the e-commerce is limited. Thus, This research combines online and mobile navigation of panelists. The total number of panelist is 311 including 4,627,668 visits. Data is provided by Cheil Worldwide Inc. of Korea. First, the navigation patterns show that the funneling navigation (the depth of navigation) leads customers to the visit of shopping sites. Otherwise, the customers who have wandering navigation (search-oriented navigation using queries) do not tend to visit shopping sites. Secondly, the online and mobile familiarity have the moderating effects on the shopping site visit. To be specific, the high familiarity diminishes the positive effects of funneling navigation patterns. Also, the negative effects of wandering navigation are diminished. Third, this research found the relationship between the online and mobile. In the online based shopping, only online based patterns and familiarity have the impact on the shopping site visits. Otherwise, in the mobile based shopping, mobile based patterns, and mobile and online familiarity have an impact on the shopping site visits. This means that customers complementary utilize these media in the mobile based shopping.

3 - Exploration vs. Exploitation in Rapid Coupon Personalization

Aliaa Atwi, PhD Candidate, Massachusetts Institute of Technology, 77 Massachusetts Avenue, E62-585, Cambridge, MA, 02139, United States of America, aliaa87@mit.edu, John Hauser

Data analytics have led to increasingly personalized coupon offers. Such analytics tradeoff the cost of inducing trial with the value from repeat purchasing and brand loyalty, ideally without rewarding purchases that would have otherwise occurred. Most methods seek to maximize the net present value of profits based on predicted behavior which, in turn, is based on the observed characteristics of potential consumers. However, we can do better by taking into consideration the information value of coupons. A coupon that does not maximize profit given our current information about consumers, may still provide valuable information about their preferences. This information enables more profitable coupon allocation and higher profits. The optimal tradeoff between exploring consumer preferences and exploiting this knowledge to maximize profit can be captured by a multi-armed bandit formulation with, possibly, interdependent arms. Using synthetic data we explore alternative strategies. Solutions, which take into account the information value of a coupon, outperform myopic strategies which do not. We also consider how the solution changes when consumers themselves learn their preferences through experience. The challenge for practical implementation is computational complexity. Methods such as MCMC provide highly accurate descriptions of consumer behavior, but are computationally intense and may not scale to handle big-data settings where retailers, carrying tens of thousands of products, dispense coupons based on the customers' past and current purchases. We explore approaches to learn the parameters of multinomial choice models rapidly and in real time. For example, an approach based on deterministic functional-form approximations and message-passing is promising.

4 - The Effect of Price Incentives on Customer Value

Christian Schulze, Assistant Professor, Frankfurt School of Finance & Management, Sonnemannstr. 9-11, Frankfurt, 60314, Germany, email@christian-schulze.de, Leigh McAlister

We analyze how the characteristics of price incentives (such as coupons or loyalty programs) affect customer value in an online retail setting. Specifically, we investigate the usefulness of price incentives for acquiring new customers, as well as their effect on the purchase behavior of new versus existing customers. In our empirical study, we compare about 3,000 customers that were acquired with the help of four different price incentives to about 40,000 customers that were acquired without incentives, but might use them during a subsequent purchase. First results indicate that the use of price incentives for customer acquisition results in substantially lower customer value, driven by fewer orders, lower margins, and higher return rates, among others. At the same time, we observe important differences among the four price incentives and investigate, which price incentive characteristics lead to the most desirable outcomes.

■ TD06

Room E234

Social Influence I

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Mark Kilgour, Chair, University of Waikato, Private Bag 3105, 3240, Hamilton, New Zealand, kilgour@waikato.ac.nz

1 - Social Media and Movie Revenues: Influencers or Predictors?

Ashwin Malshe, Assistant Professor, ESSEC Business School, 100 Victoria St. #13-02, Singapore, 188064, Singapore, malshe@essec.edu, Jan Ondrus

Recent research suggests that conversations on social networks can be "mined" to predict movie sales. It is, however, seldom studied whether social media act as influencers or predictors of movie revenues. The authors study the effect of three social media – Facebook, Twitter, and YouTube – on movie sales in the opening weekend, in the week following the movie release, and over the long term. Using a sample of 75 Hollywood movies released from 2010 to 2012, the authors find that social media play the roles of not only predictor but also influencer of movie revenues. The analysis includes multiple control variables such as advertising expenditure, production budget, critical reviews, star power, genre, and MPAA ratings. There is a marked variation in the efficacy of the three social media, however. Whereas Twitter and YouTube (trailer views) influence the opening weekend sales, Facebook has no such effect. Further, Twitter also predicts long-term gross revenue while Facebook and YouTube don't emerge as relevant predictors. The analysis of the valence of daily Tweets suggests that Tweets with positive valence influence movie sales positively but higher variance in the valence reduces revenues. The interaction term between the positive valence and variance of the valence influences opening weekend revenues positively, which suggests that increased variance may increase the credibility of the positive Tweets. This finding is important for movie studio managers for promoting movies on Twitter.

2 - Social and Personal Values on Brand Preference in Market and Transitional Economies

Christine Eunyo Sung, Assistant Professor, Old Dominion University, 1 Old Dominion University, Norfolk, VA, United States of America, esung@odu.edu, Roger Calantone, Patricia Huddleston

Do parents and their children from market and transitional economies share similar values? We compared young adult consumers and their parents' cohorts from a long-standing market economy (LME: U.S.) vs. those from a transition economy (TE: Russia). We contrasted social values (e.g., trust, social belonging), and personal values (e.g., self-image) on brand preference of the young cohort and their parents cohort. A secondary data set, from a marketing research firm provided the sample. Participants for the young cohort (Russia N=199, US N=203) in the survey were between 20 years and 30 years old and participants for the parents' cohort (Russia N=387, US N=401) were between 40 and 70 years old. An adjusted 5-point Likert scale was used to measure trust, social belonging, and selfimage and brand preference. After a CFA equivalence test, we used structural equation modeling to analyze the data, we found that trust was significantly related to social belonging; social belonging was significantly related to self-image; self-image was significantly related to brand preference. ?2 difference tests revealed significant differences between the parents' cohort and young cohort in LME and TE. There was a significantly different effect of social belonging on self-image between the parents' cohort (?21=.86) and young cohort (?21=.16) in Russia. An investigation of the new "market generation" to determine effective marketing strategies is important, because this group was first exposed to complex transitional environments by their parents' behavior and their contemporary Western brands.

3 - Increasing Viewership of User Generated Content: Implications from a YouTube Study

Minakshi Trivedi, Professor of Marketing, State University of New York at Buffalo, School of Management, Buffalo, NY, United States of America, mtrivedi@buffalo.edu, Jei Young Lee, Jeonghye Choi

Launched in 2005, YouTube has become the 2nd largest search engine (after Google) allowing companies to set up their own channels and interact with customers through videos, comments and subscriptions. Companies have been quick to take advantage of this new medium of communication – Burson and Marsteller (2012) report that 79 percent of the Fortune Global 100 companies have YouTube accounts and include it as part of their social media strategy. Recognizing the importance of increasing viewership as a key factor in the success of their marketing campaigns, companies are encouraging viewers to further share the videos on various social media platforms. In fact, it is reported that 47 percent of all videos on YouTube have incoming links from external websites outside YouTube, and the aggregate views of these linked videos account for 90 percent of the total views (Broxton et al 2011). Clearly, leveraging social media platforms is now an important tool in online marketing. We use an econometric model to empirically study the factors that influence YouTube viewership, and show that not only are such links important, the source of the links also play a critical role in viewership. We expect our results to provide significant insights regarding characteristics that impact the pattern of viewership and what companies can do to encourage wider video diffusion.

4 - How "Social Media Creativity" is Redefining the Award Process

Mark Kilgour, Chair, University of Waikato, Private Bag 3105, 3240, Hamilton, New Zealand, kilgour@waikato.ac.nz, Sheila Sasser

The proliferation of Social Media has significant implications for marketers, as consumer behaviour continually evolves. Changes extend to the very nature of how organizations communicate, collaborate and develop relationships with consumers, communities and stakeholders. Creative development frameworks and processes are fundamentally affected, necessitating an adaptive and spontaneous approach. Integrating earned, owned and paid social media throughout entire IMC marketing functions, at the bequest of clients has prompted a new waves of mergers, acquisitions, partnerships and investments in people, resources, systems, technology and sourced talent just to remain competitive. A recent merger of two of the largest agencies, Omnicom and Publicis, is one indicator of this dramatic change. Another is the prevalence of entirely new categories, rules, criteria and standards for juried advertising award shows. Cannes Lions, Ogilvy Awards, Addys, IPA, and the D Show entries illustrate this change over the past decade. New measurement models for creativity and effectiveness are redefining juried award show competitions internationally. Social media continues to be an increasingly prominent feature in award winning campaigns. From simply being an IMC element five years ago, social media now shapes the creative concept and message strategy as a structural integration imperative. Thus, social media is driving creative campaign choice and media selection. Longitudinal analysis of advertising award category data was conducted across a five year period to assess trends in winning campaign selections. Preliminary results provide new insights into industry recognized best practices for creative effectiveness. Implications for academics, organizations and brand marketing managers are discussed.

■ TD08

Room E304

Advertising Effectiveness II

Contributed Session

Chair: Peter Danaher, Monash University, Department of Marketing, Caulfield, Melbourne, Australia, peter.danaher@monash.edu

1 - Wearout or Weariness? Accounting for Potential Negative Consequences of Ad Volume and Timing

Inyoung Chae, INSEAD, Boulevard de Constance, Fontainebleau, France, inyoung.chae@insead.edu, Fred Feinberg, Hernan Bruno

Cumulative advertising exposure is often accounted for as a latent variable, "goodwill" or "adstock", with imposed parametric forms that allow for increases with ad exposures and decreases for forgetting thereafter. These forms entail specific consequences – notably, that additional advertising always raises ad stock – for optimizing individual-level ad placement. We develop a flexible model that can accommodate different adstock shapes over repeated exposures and their relative timing. For instance, some users may exhibit threshold effects (i.e., numerous exposures before any effects can be observed and the effects get stabilized after certain number of exposures), some may be "S-shaped", and still others show immediate diminishing returns. Critically, standard formulations rule out weariness: a point past which additional advertising actually decreases propensity to act. Using unique individual-level clickstream data for a financial service campaign, we estimate flexible, nonmonotonic adstock response contours. Our formulation allows for heterogeneity in terms of adstock rise and fall, as well as distinguishes among customer segments based on ad response, thereby lending itself to tailored ad placement. Moreover, heterogeneous adstock shape manifests in site usage behavior, and conversion to purchase can be related to individual usage metrics like intensity and width of browsing behaviors, site visit statistics, and conversion to purchase. From a managerial perspective, the proposed model helps advertisers optimize ad placement in regard to depth, frequency, and a variety of intertemporal implementation issues.

2 - Location, Location, Location: Repetition and Proximity Increase Advertising Effectiveness

Garrett Johnson, Assistant Professor, University of Rochester, Simon Business School, Simon School – CS3-206, Rochester, NY, 14627, United States of America, Garrett.Johnson@Simon.Rochester.edu, David Reiley, Randall Lewis

Yahoo! Research partnered with a nationwide retailer to study the effectiveness of display advertising on online and in-store sales for more than three million shared customers. We measure the impact of higher ad impression frequency using a simple experimental design on Yahoo!: users in the 'Full' treatment group see the retailer's ads, users in the 'Control' group see unrelated control ads, and users in the 'Half' treatment group see an equal probability mixture of the retailer and control ads. We find statistically significant evidence that the retailer ads increase sales 3.6% in the Full group relative to the control group. Doubling the average number of impressions per person, from 17 to 34 in a two-week period, nearly doubled the treatment effect. Leveraging our experimental design, we find that the returns to ad frequency are approximately linear among those who were eligible to see up to 50 ads and the marginal return to an additional ad exposure is 4¢. We also find evidence that the ads had a stronger effect on customers who live closest to the retailer's brick-and-mortar locations, customers who purchased recently, loyal customers, and wealthy customers.

3 - A Model of Demand for Goods and Advertising

Anna Tuchman, Stanford GSB, 655 Knight Way, Stanford, CA, 94305, United States of America, tuchman@stanford.edu, Harikesh Nair, Pedro Gardete

The standard paradigm in the empirical literature is to treat consumers as passive recipients of advertising by firms, with the level of ad-exposure determined by consumer characteristics and targeting technology. This paradigm ignores the fact that consumers may actively choose their consumption of advertising, thus effectively rendering the level of ad-exposure endogenous. Endogenous consumption of advertising is common. Consumers can easily choose to change channels to avoid TV-ads, click away from paid online-video-ads (e.g., TrueView ads on YouTube), or discard direct mail without reading advertised details. Becker and Murphy (1993) recognized this aspect of demand for advertising and argued that advertising should be treated as a good in consumers' utility functions, thereby effectively creating a role for consumer choice over advertising consumption. They argued that in many cases demand for advertising and demand for products may be linked by complementarities in joint consumption. We leverage access to an unusually rich dataset that links the TV-ad consumption behavior of a panel of consumers with their product choice behavior over a long time horizon to measure the co-determination of demand for products and ads. The data suggests an active role for consumer choice of ads, and for complementarities in joint demand. To interpret the patterns in the data, we fit a structural model for both products and ads that allows for such complementarities, which we use to simulate the effect of ad-targeting in an environment in which ad-exposure is endogenous. We believe the results have important implications for interpreting ad-effects in empirical work generally, and for the assessment of ad-effectiveness in many online ad-settings.

4 - Comparing the Effectiveness of Multiple Direct Marketing Efforts in Offline and Online Environments

Peter Danaher, Monash University, Department of Marketing, Caulfield, Melbourne, Australia, peter.danaher@monash.edu, Harald van Heerde

The purpose of this study is to compare the relative effectiveness of a traditional media channel (catalog) and 6 new media channels (email, banners, organic and paid search, social media and website exposure to the focal brand). Our measures of effectiveness are the number of items purchased and dollar-sales generated from a nationwide marketing effort conducted by a major specialty retailer based in North America across a two-year period, with data collected at the individual level. Because purchases can be made in-store or on the internet, we aim to see how the various media channels interact to elicit sales for each of these purchase channels. For example, catalogs might have a dual purpose, being effective for both offline and online purchases, while email might trigger just online sales. A further unique element to this study is that the specialty retailer manages three brands and sales are correlated across the brands and the purchase channels. We develop a multivariate Tobit type_II model for the data and derive advertising elasticities for each advertising media, across the purchase channels and brands. Understanding the synergy among various media and their alignment with alternative purchase channels, across multiple brands, is a largely unanswered question, which we aim to answer in this research study.

■ TD09

Room E301

Channels: Competition

Contributed Session

Chair: Arnaud De Bruyn, Professor of Marketing, ESSEC Business School, Av Bernard Hirsch, Cergy, 95000, France, debruyn@essec.edu

1 - Platform Screening Mechanisms and the Role of Long Tail Sellers

Zibin Xu, University of Southern California, Los Angeles, CA, 90034, United States of America, zibin.xu@gmail.com, Yi Zhu, Shantanu Dutta

Platforms like Google, Amazon and Tmall (the dominant B2C platform in China) rely on profit or service screening mechanisms to filter unwanted sellers that sell niche products, who are also known as long tailed sellers. Platforms claim that screening helps to weed out the lowest service providers and encourage the surviving sellers to improve service. However, third party reports have disputed these claims. We establish an analytical model to study how each platform screening rule impacts service provision. Our results suggest that 1) contrary to Google's claim, the profit screening does not always remove the long tail seller with poor service; 2) screenings, either by profit or by service, may reduce the average service on the platform. 3) Some long tail sellers, even though providing lower (higher) service, prevent other sellers from shirking (improving) in service. This competitive role of long tail sellers sheds light on the understanding of niche sellers in an online service ecosystem and calls for more effort to protect the valuable but vulnerable businesses.

2 - Optimal Contracts with Asymmetric Power, Quality Differentiation and Heterogeneous Preferences

Shameek Sinha, Professor in Marketing, IE Business School, IE University, Calle Maria de Molina 12, Madrid, 28006, Spain, shameek.sinha@ie.edu

Retail markets are often characterized by asymmetric market and channel power between the upstream and downstream channels. Manufacturers and retailers differ in their information availability, thus creating bargaining asymmetry. In a market where a dominant retailer co-exists with fringe retailers, preference heterogeneity necessitates the existence of both types and quality differentiation implies competition among manufacturers. So contractual negotiations need to be devised such that contract terms are incentive compatible and individually rational for the retailer. This translates into a multidimensional principal-agent contracting problem. Researchers have considered strategic reduction of asymmetric power structures in retail through assortment management, information sharing, channel diversification and supportive marketing investments. Also, retailer power asymmetries are beneficial under quantity discounts and revenue sharing contracts. We propose an analytical model that designs optimal contracts being offered by competing manufacturers to dominant and fringe retailers under such market structure with both preference heterogeneity and quality differentiation as well as information asymmetry. We show that, for the dominant retailer, the manufacturers adopt a non-linear pricing policy with quantity discounts and revenue sharing options depending on the manufacturers' competitive strengths, thus motivating the retailer to put in costly effort. For the fringe retailers, manufacturers propose a linear pricing. Manufacturers with more power create channel diversification and provide supportive investments while weaker ones opt for information sharing and assortment management arrangements. Using these optimal contract negotiation structures the manufacturers not only meet the heterogeneous consumer preferences but is also able to limit the bargaining superiority of the powerful retailer through credible competition from fringe retailers.

3 - Understanding the Normative Role of Industry Standards in Channel Negotiations

Arnaud De Bruyn, Professor of Marketing, ESSEC Business School, Av. Bernard Hirsch, Cergy, 95000, France, debruyn@essec.edu, Gary Bolton, William Ross

Regarding pricing policies and negotiation outcomes, industry standards play a significant role in practice, but often appear arbitrary, and are most likely suboptimal from a profit-maximizing perspective. Regardless of their shortcomings, we argue in this paper that such standards play the role of social norms, which are essential to help negotiating parties reach a profitable and sustainable agreement. Absent of social norms, the uncertainty surrounding what the other players will do are such that defensive strategies are favored, to the expense of cooperative strategies. We develop and experimentally test a game in which a manufacturer and a reseller try to reach an agreement, where we manipulate the nature (length) of their relationship and the presence and nature of industry norms (absence of norm, competitive norms, collaborative norms). We show that both industry norms and a stable business relationship are required to reach a cooperative solution, and that contrary to standard economic theory, the combination of asymmetric utility functions (as predicted by the Equity-Reciprocity-Competition theory) and uncertainty about the other player's strategy might push negotiators to deviate from the Nash equilibrium in the direction of "no deal".

■ TD10

Room E331

Pricing: Dynamics III

Contributed Session

Chair: Christian Schlereth, Goethe University, Frankfurt, Grueneburgplatz 1, Frankfurt, Germany, schlereth@wiwi.uni-frankfurt.de

1 - The Dynamics of Tied Goods & Compatibility: An Application to the Single-serve Coffee Systems Industry

Shaojun(Marco) Qin, PhD, University of Minnesota, 3-150 CarlSMgmt 321 - 19th Avenue South, Minneapolis, MN, 55454, United States of America, qinxx113@umn.edu, Maria Ana Vitorino, Pradeep Chintagunta

We study the pricing strategy of firms in markets with tied goods. The firm sets prices for both durable goods in the primary market and for consumables in the aftermarket. While consumer heterogeneity in tastes facilitates inter-temporal price discrimination, profits from the aftermarket provide incentives for penetration pricing. We propose a structural model that takes into account these competing incentives and estimate it using data from the single-serve coffee systems industry in Portugal. The model is used to measure the effects of compatibility between systems produced by different manufacturers on consumer welfare and firm profits.

2 - How Bundling Strategies Change in Networked Markets Across Product Lifecycle Stages

Richard Gretz, Associate Professor, Bradley University, Baker Hall 208, Peoria, IL, United States of America, rgretz@fsmail.bradley.edu, Suman Basuroy, BJ Allen

The research on bundling is vast in the economics, management, and marketing literature, and much of the bundling literature focuses on the use of bundling as a price discrimination tool to address consumer heterogeneity by segmenting consumers in static environments. However, little extant research examines the use of bundling as the firm's product offering ages or throughout the product generation lifecycle. The primary purpose of this study is to examine the strategic use of bundling as consumer reservation prices change and industry conditions change over time due to network effects. Specifically, our research questions revolve around better understanding: 1) managerial decision making regarding bundling introduction timing in networked markets, and 2) the number of bundles that should be in the market at any given time. We analyze how these decisions are impacted by generational product lifecycle, individual product age, and market share. The video game industry is used to address the research questions because the industry exhibits strong network effects. Our data comes from the NPD group (a market research firm) covering approximately 65% of industry sales from January 1995 to September 2010. It covers 15 different consoles types with 1199 console/month observations. Our findings are threefold: first, we find that the likelihood of bundle introduction and the number of bundles in the market vary across the different generational product lifecycle stages. This is consistent with our theory that managers use bundling as a way to increase product adoption to quickly build network effects by increasing the install base of the product. Second, we find that the likelihood of bundle introduction is influenced by the specific age of the console. Third, we find that firms with lower market share are more likely to introduce bundles and are more likely to have a large number of bundles in the market. This occurs because firms in a lower market position are likely to introduce bundles to try and catch up to the market leaders.

3 - (Sub) Optimality of Dynamic Pricing Decisions in a Competitive Oligopoly

Yang Wang, Doctoral Student, Rice University, 3329 Calumet St., Houston, TX, 77004, United States of America, yang.wang@rice.edu

The extant literature on capacity constrained dynamic pricing has emphasized the theoretical analysis of a monopolist's optimal pricing policies. The current study contributes to this largely theoretical field with an empirical investigation into the (sub)optimality of managerial pricing decisions in the oligopolistic Las Vegas resort market. We take a normative view of the problem by fitting the daily booking, pricing, and online review data simultaneously to a model of demand and managerial pricing decisions for both the focal firm and a set of its competitors. We introduce two types of daily level exogenous supply and demand shocks to jointly identify the models. In addition, we are able to suggest alternative optimal pricing policies that lead to potential revenue increases on the order of 10%. Furthermore, we examine the impact of incorporating online reviews and competitor responses in the manager's dynamic pricing decisions on its effect on the bottom line. We contribute to the substantive understanding of dynamic pricing by demonstrating potential gains and limitations in a mature market where dynamic pricing is considered a core competency of the business. Furthermore, we provide empirical evidence of the halo effect in managers' pricing decisions and demonstrate a potentially novel use of online reviews.

4 - Existence and Antecedents of Time-variant Pricing Plan Preferences: Is Fairness all That Matters?

Christian Schlereth, Goethe University Frankfurt, Grüeneburgplatz 1, Frankfurt, Germany, schlereth@wiwi.uni-frankfurt.de, Bernd Skiera, Fabian Schulz

Time-variant pricing plans align prices with supply and demand. They are particularly attractive in markets in which supply and demand fluctuate strongly and mismatches occur regularly. Previous research on the existence and antecedents of time-variant pricing plan preferences has noted perceived unfairness of these plans as an explanation for the prevalence of time-invariant pricing. However, consumers may also consider such economic factors as the costs, effort, and risk associated with different pricing plans. Therefore, we develop a theoretical framework of antecedents of pricing plan preferences that encompasses both economic and fairness considerations. This study uses this framework in a discrete choice experiment in which the authors measure the preferences for one static and three dynamic time-variant plans relative to the prevalent time-invariant plan in electricity markets and determine their antecedents. The results show that the dynamic pricing plans are rejected even if significant cost reductions are offered. Fairness considerations, however, play a minor role relative to economic considerations such as the perceived effort and risk related to the plans.

■ TD11

Room E334

Advances in Survey Research Methodology

Contributed Session

Chair: Ulf Böckenholt, John D. Gray Professor of Marketing, Northwestern University, 2001 Sheridan Rd, Evanston, IL, United States of America, u-bockenholt@kellogg.northwestern.edu

1 - An Insightful Segmentation Approach to Capture Cultural Differences: Going Beyond Hofstede

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In recent years, researchers have shown a growing interest in capturing individuals' cultural differences, not only across but also within nations. When segmenting individual values using large datasets the problem emerges that clustering techniques typically result in a very large number of segments reducing its managerial relevance. A novel technique is therefore needed to overcome the problem of huge numbers of segments. We propose a technique that represents observations in a multivariate data set, as convex combinations of a few (not necessarily observed) extreme points in the dataset. We demonstrate the advantages of our approach in a cross-national context using Schwartz' cultural values. In representative sample of 51,641 respondents living in 29 countries, including Western, emerging and transitional countries, we find that human values differ systematically across a range of important socio-demographic groupings. Three basic values profiles are identified and used to describe all respondents as "mixtures" of these profiles. Most of the variation in values profiles was due to the categories of country of residence and age, with income, education and gender categories contributing to a lesser extent. The three values profiles exist in all countries, but the prevalence differs across countries. The scores for each individual allow us to aggregate individuals to any socio-demographic or geographical grouping. We find that the latter groups are better able to predict country differences in, for instance, innovativeness and well-being than often used country culture characteristics such as the Hofstede dimensions.

2 - A Cross-national Investigation into Common Method Variance in Consumer Measures

Fan Jiang, Doctoral Student, University of North Carolina at Chapel Hill, 300 Kenan Center Drive, Chapel Hill, NC, 27599, United States of America, fjiang@kenan-flagler.unc.edu, Jan-Benedict Steenkamp

Common method variance (CMV), which inflates construct reliability and biases (either upward or downward) correlations among constructs, is commonly regarded as a pervasive problem in survey research (Podsakoff et al. 2003). However, there is little evidence about its pervasiveness and potentially deleterious effects in consumer research. Moreover, existing evidence on CMV is largely confined to one country, the U.S., while research suggests that people in different countries can exhibit different response behaviors (Baumgartner and Steenkamp 2001, Steenkamp et al. 2010), and that one of the most common recommendations to reduce CMV, viz., reverse coded items, may not work in other (Asian) countries (Wong et al. 2003). The present paper intends to address these gaps in our knowledge. More specifically, we will answer the following four research questions. Does CMV substantially inflate the reliability of consumer constructs? Does CMV substantially bias the correlations among consumer constructs? Does the magnitude of the biases caused by CMV differ across countries and why? Is the use of reverse coded items a globally effective way to reduce CMV? To answer these questions, we collected data on eight consumer constructs in a sample of 13,000 consumers from 28 countries in four continents. We will present the results of our study at the conference.

3 - Testing Non-response Bias in Survey Data: An Updated Approach

Songting Dong, Senior Lecturer, Australian National University, RSM, LF Crisp Bldg 26, ANU, Canberra, 0200, Australia, songting.dong@anu.edu.au, Ujwal Kayande

Detecting non-response bias in survey data is important for determining the representativeness of a sample, which can in turn affect the validity of survey findings. The most commonly used bias detection method focuses on detecting whether the mean of a variable might be different for non-respondents relative to those who did respond. The method was proposed by Armstrong and Overton (1977), which continues to be one of the most cited papers in marketing (for e.g., it has gathered over a thousand Web of Science citations since 2012). However, most survey researchers in marketing who use such mean-focused methods are actually interested in accurately estimating relationships between variables, not variable means. This misalignment leaves open the question of whether mean-focused methods can detect a bias in relationships. We present a simulation study that shows that the mean-focused method is not particularly good at detecting bias in relationships. We propose and test multiple statistical approaches to enhance the likelihood of detecting non-response bias in variable relationships.

4 - Modeling Motivated Misreports to Sensitive Survey Questions

Ulf Böckenholt, John D. Gray Professor of Marketing, Northwestern University, 2001 Sheridan Rd, Evanston, IL, United States of America, u-bockenholt@kellogg.northwestern.edu

Asking sensitive or personal questions in surveys or experimental studies can both lower response rates and increase item non-response and misreports. Although non-response is easily diagnosed, misreports are not. However, misreports cannot be ignored because they give rise to systematic bias. The purpose of this paper is to present a modeling approach that identifies misreports and corrects for them. Misreports are conceptualized as a motivated process under which respondents edit their answers before they report them. For example, systematic bias introduced by overreports of socially desirable behaviors or underreports of less socially desirable ones can be modelled, leading to more—valid inferences. The proposed approach is applied to a large-scale experimental study and shows that respondents who feel powerful tend to overclaim their knowledge.

■ TD12

Room W300

Models of Adoption & Customer Lifetime Value

Contributed Session

Chair: Howard Dover, Director, Center for Professional Sales, University of Texas at Dallas, 800 Campbell Rd, Richardson, TX, 75080, United States of America, Howard.Dover@utdallas.edu

1 - Customers' Behavioral Antecedents of New Product Trial and Repeat Purchase of Consumer Packaged Good

Kyoungmi Kim, University of Alabama, 1225 Unit I, Church Street, Decatur, GA, 30030, United States of America, kkim31@cba.ua.edu, Arthur W. Allaway, Giles D'Souza

Although numerous researchers have attempted to understand the characteristics of customers who are more likely to purchase new products, understanding of customers' adoption behaviors is still limited (Hauser, Tellis, and Griffin 2006). This proposal addresses this gap. Because of the recent availiability of scanner-based purchase data, it is possible to actually measure potentially important behavioral characteristics of consumers within the category before and after the launch of new products (e.g., domain-specific innovativeness, innate innovativeness, loyalty to the firm brand, variety-seeking and so on). In this study, these previous category behaviors are proposed as important antecedents of the adoption of new products launched into the product category. This study suggests trial and repeat purchase as a two-stage adoption process and proposes two studies testing customers' trial and repeat purchases with econometric modeling techniques (e.g., split-population hazard model and multinomial probit model). Information Resources Incorporation (IRI) panel data for 16 new products from 6 grocery product categories are utilized to test the proposed hypotheses and to show the preliminary results of the models. We find that as customers have more variety-seeking tendency, more domain-specific innovativeness, more innate innovativeness, and less loyalty to the competitive brand, the trial likelihood of the new product will be higher and the time to try the new product will be shorter. We also find that among the three customer segments, the positive effect of domain-specific innovativeness on purchase likelihood is stronger for repeaters than for triers.

2 - Unveiling the Association between the Transaction Timing, Spending and Drop-Out Behavior of Customer

Nicolas Glady, Associate Professor, ESSEC Business School, Avenue Bernard Hirsch, BP 50105, Cergy Pontoise, 95021, France, glady@essec.edu, Aurélie Lemmens, Christophe Croux

The customer lifetime value combines into one construct the transaction timing, spending and drop-out processes that characterize customers. Recently, the potential association between some of these processes, either at the individual customer level (i.e. intra-customer association) or between customers (i.e. inter-customer association) has received increasing attention from marketing scholars. In this paper, we propose an integrative approach to model all possible types of association between these processes simultaneously, both at the intra- and inter-customer levels. The approach relies on copulas, a flexible statistical tool to capture the association between probability distributions of different nature. In order to investigate the existence and direction of the intra and inter-customer association across product categories, we apply our method to the purchase transactions of four different data sets, namely online music albums sales, securities transactions, utilitarian and hedonic fast-moving consumer good retail sales. We develop a typology of the different levels (intra or inter-customer) and directions (positive or negative) of association, explain the behavioral rationales that underline them and review the managerial recommendations given these behaviors. For all product categories, we find a substantial amount of association both at the intra- and inter-customer level. For the product categories where the association is the strongest, we find that the association enhances the predictive performance of the model. Overall, we also find that frequent buyers spend more on average per transaction and have a longer lifetime than others. In addition, we find that a substantial share of the customers shows compensating purchase behavior but that the vast majority tends to show non-compensating patterns. Finally, we show how unveiling these associations contribute to better customer relationship management strategies and can be used to target customers efficiently.

3 - The Impact of Usage and Trade-in Value on Consumer Preferences for Upgrading and Downgrading

Bradley Fay, PhD Student, Arizona State University, P.O. Box 874106, Tempe, AZ, 85287, United States of America, bradley.fay@asu.edu, Rajiv Sinha, Chadwick Miller

Previous research has demonstrated that consumers use mental accounting to make product replacement decisions. In particular, consumers are more likely to replace a product when they receive compensation for the previously owned product. By treating product replacements and product upgrades synonymously, previous research has ignored the fact that consumers must make choices with regard to both upgrading and downgrading specific features (Okada, 2001, 2006; Bolton et al., 2008). For example, consider the decision to replace an SUV with a compact hybrid vehicle. While fuel eciency is upgraded, cargo capacity and safety are downgraded. In this research, we extend the literature regarding how consumers use mental accounting to make replacement decisions by simultaneously comparing upgrading and, for the first time, downgrading choices. Furthermore, we contribute to the upgrading literature by showing how consumers make differential upgrading decisions (hedonic vs utilitarian) by focusing on unique aspects of their mental accounts. We propose a three-stage model of the consumer product replacement decision where a consumer: (1) chooses to replace a product, (2) decides which attributes to upgrade and/or downgrade, and (3) the size of the magnitude of change. Using data from the 2009 Cash Allowance Rebate System (CARS) program, Kelly Blue Book, two surveys from J.D. Power and Associates, and industry standard categorization, we constructed a dataset of 425,595 observations to model the impact of customer usage and trade-in value on consumer preference for upgrading and downgrading in a multiple discrete-continuous framework (Bhat, 2008, 2005). Preliminary results indicate that the magnitude of the trade windfall increases customer preference for downgrading hedonic attributes.

4 - A Case for Event Related Dependence

Howard Dover, Director, Center for Professional Sales, University of Texas at Dallas, 800 Campbell Rd, Richardson, TX, 75080, United States of America, Howard.Dover@utdallas.edu

When modeling more than one event, one must choose an appropriate method for capturing the dependency between each event. This project compares two different methods of dependency, namely multivariate frailty and event related dependency. While there is marginal difference between the two models when computing lifetime value, the same cannot be said when looking at managerial relevant risks of transitions in a multi-state model. Models with event related dependence more accurately predict potential attrition, purchase, and re-purchase incidence. When the goal of the model is to determine appropriate probability of revenue generating events, the event related dependency model provides greater intelligence to the firm.

■ TD13

Room W330

Marketing and Financial Performance II

Contributed Session

Chair: Cem Bahadir, University of South Carolina, 1705 College Street, Columbia, SC, United States of America, cem.bahadir@moore.sc.edu

1 - Brand Equity Effect of Lenovo's Acquisition of the IBM PC Division An Event Analysis

Yalai Chu, PhD Candidate, NUS Business School, Department of Marketing, Singapore, 117592, Singapore, chuyanlai@nus.edu.sg, Junhong Chu, Hongju Liu

The literature on mergers and acquisitions (M&As) has largely overlooked consumer's response to M&As. In this paper, we provide a marketing perspective of M&As by investigating the impact of consumer's response to M&As on firm's post-M&A performance. In particular, we assess how Lenovo's acquisition of the IBM PC Division affects Lenovo's brand equity, cost and profit inside China. We use a structural modelling approach in combination with the difference-in-difference method and counterfactual experiments to quantify the total profit impact and decompose the impact into different sources. We find the acquisition raises consumers' valuation of the Lenovo brand and generates cost synergies, and the augmented brand valuation helps to pull Lenovo out of the pricing war among the Chinese PC vendors. Brand equity gain due to brand perception enhancement is the most important contributing factor to Lenovo's profit increase, followed by product portfolio improvement and cost synergies. Further, we find that perception gain primarily arises from IBM Think Series' boost rather than co-branding with the IBM brand per se. In addition, there are strong synergies among brand equity, product portfolio, and cost reductions in increasing post-acquisition profits.

2 - Value of Customer Bases in Mergers and Acquisitions

Cem Bahadir, University of South Carolina, 1705 College Street, Columbia, SC, United States of America, cem.bahadir@moore.sc.edu, Sundar Bharadwaj

Customer bases of target firms are integral part of the assets acquired through mergers and acquisitions (M&A's). In many M&A transactions, customer portfolios account for significant portion of the value in M&A's. In fact, the failure of many M&As are attributed to the poor value of customers. Despite the importance of customers to M&A's, there is limited empirical work on the value of customers in this context. In this study, we seek to understand the factors that influence the financial value the acquirers attribute to the customer bases of target firms. These factors are related to resources and capabilities of the target and acquirer firms, and market level characteristics. In order to test our hypotheses, we compiled a unique data set that incorporates the financial value of customer bases of target firms in M&A's. The findings of the study have important implications for senior managers in firms as well as the investment community.

3 - Mining for Marketing: An Objective Measure of Marketing's Importance

Brent Kitchens, University of Florida, 4046 NW 60th Ave, Gainesville, FL, 32653, United States of America, brentkitchens@ufl.edu, Deb Mitra, Praveen Pathak, Joseph Johnson

Marketing managers and researchers increasingly believe that the marketing function is losing its clout. This belief stems from subjective perceptions about marketing's diminishing role in setting firm strategy as well as consumer resentment towards marketing. In this paper, we introduce the investors' perspective into the debate. Given efficient markets, we posit marketing's importance to investors is reflected in the magnitude of changes in a firm's value in response to the firm's marketing news. Specifically, when marketing is unimportant, an increase in a firm's marketing news should have little impact on its stock value. Moreover, if marketing is indeed losing its clout, any impact should diminish over time. We use information science techniques to extract marketing news, i.e., the relative marketing content of a business news report. Based on the stock market impact of marketing news contained in 752,622 news reports on S&P 500 firms spanning nearly three decades, we deduce that marketing is significantly important to investors. We find cyclical but no sustained diminishing trends in marketing's importance. In fact, marketing's importance is periodically decreasing during periods of economic prosperity and increasing during periods of economic adversity. We discuss the implications of our findings and opportunities for further research.

■ TD14

Room W100

Choice Models: Multiple Categories

Contributed Session

Chair: Sudipt Roy, Assistant Professor of Marketing, Indian School of Business, Gachibowli, Hyderabad, India, sudipt_roy@isb.edu

1 - Purchasing the Parts to Consume the Whole: A Dynamic Cross-category Model with Consumer Stockpiling

Ludovic Stourm, Doctoral Student, University of Pennsylvania, The Wharton School, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, stourmlu@wharton.upenn.edu, Raghuram Iyengar, Eric Bradlow

In the existing literature on cross-category purchases, researchers typically specify a utility function on the quantities of goods purchased in a shopping basket. This approach ignores that a price discount in one category may have a delayed impact on the sales of another category if those categories are jointly consumed in the future. Moreover, specifying a functional form to capture flexible patterns of complementarity has proven to be a difficult task. In this paper, we model complementary goods in a new way by explicitly modeling how they are consumed. In our approach, consumers not only decide what ingredients to purchase, but also how to consume them. In particular, consumers may choose to allocate some of their ingredients to build and consume "composite goods" according to a "recipe list", or to consume the ingredients by themselves. By specifying a direct utility on this extended consumption choice set, our model can capture patterns of complementarity in a flexible and parsimonious way. Because the ingredients may be purchased at different times before being jointly consumed, we embed our consumption utility in a dynamic structural model, in which forward-looking consumers purchase, consume and store goods at each time period. This allows us to capture the dynamic spillover effects of price and promotions across categories.

2 - Measuring Substitution and Complementarity among Offers in Menu Based Choice Experiments

Tetyana Kosyakova, Goethe University Frankfurt, Grüeneburgplatz 1, Frankfurt, Germany, kosyakova@econ.uni-frankfurt.de, Christian Neuerburg, Thomas Otter

Choice experiments designed to extend beyond the classic application of choice among perfect substitutes have become popular in marketing research recently. In these experiments, often referred to as menu based choice, respondents face choice sets that may comprise substitutes, complements, and offers providing utility independently, or any mixture of these three types. Consequently, the utility maximizing choice may be a combination of the individual offers present in a choice set. The inferential challenge posed by data from such experiments is in the calibration of utility functions that accommodate a mix of substitutes, complements, and 'independent' offers. Moreover, while a prior understanding of the product categories under study may, for example, suggest that two offers in a set are essentially perfect substitutes, this may not be true for all respondents. To address these challenges, we combine the autologistic model with a hierarchical prior that estimates potentially strong bi-variate utility relationships between offers as a function of covariates such as e.g., essentially perfect substitution as a rule between certain types of offers, but allows for exceptions. We find empirical support for our model in a menu based conjoint experiment investigating demand for game consoles and accessories, and illustrate implications for optimal pricing.

3 - Driving the Drivers

Hyeong-Tak Lee, PhD Candidate, University of North Carolina at Chapel Hill, Kenan-Flagler Business School, Chapel Hill, NC, 27599, United States of America, Hyeong-Tak_Lee@kenan-flagler.unc.edu, Sriraman Venkataraman

Today, most consumers inform themselves via online search before transacting either online or oine. This is particularly true in automobile retailing where (i) o-ine search is expensive, (ii) the set of available alternatives is very large, and (iii) product availability varies signicantly across geographic markets and over time. In this study, we show how combining path-to-purchase activity with oine sales aords more precise estimates of consumers' substitution patterns than approaches that use sales data alone. Much of the improvement is realized by accommodating observed consideration sets revealed in pre-purchase search process. We use the recovered model parameters to illustrate the impact of exogenous shocks to product availability, television advertising, etc.

4 - Do Supplements Increase Customer Retention? Investigation with a Copula for MV Poisson Renewals

Sudipt Roy, Assistant Professor of Marketing, Indian School of Business, Gachibowli, Hyderabad, India, sudipt_roy@isb.edu, Purushottam Papatla, Dimitris Karlis

The customer relationship management literature suggests broadening relationships to multiple products to increase customers' switching costs and retention. For instance, based on Blattberg and Deighton (1996), Burnham, Frels and Mahajan (2003) suggest that the "the degree to which a customer buys complements and supplements to the core product determines the intrinsic retainability of the customer." Surprisingly, there is little empirical research as yet regarding whether this is indeed the case although understanding the role of supplements in retaining customers is important in many categories like music (e.g., music albums and concerts), newspapers (e.g., subscription to the daily edition of The New York Times with an optional subscription to the digital edition) and magazines (e.g., Fortune and Fortune for Small Business). This is the issue that we examine empirically in this research using the magazine category. Our data includes subscription renewals to a number of magazines a subset of which have a core and a supplement. We therefore investigate whether subscribing to the supplement affects the number of renewals of the core magazine; magazines without supplements serve as the baseline in our analysis. Methodologically, we assume Poisson distributed renewals for each magazine. To account for potential inter-magazine relationships, we investigate the renewal distributions jointly using a Gaussian copula while also allowing for zero-inflation, over-dispersion, and right censoring. Our results suggest that subscription to supplements indeed strengthens the demand for the core magazines. Perhaps not surprisingly, this effect is stronger if the subscription to the supplement begins after the customer has had some relationship with the core.

■ TD15

Room W130

Consumer Behavior II

Contributed Session

Chair: Sabari Raghaven Prasanna Venkatesan, Assistant Professor, Bharathidasan Institute of Management, MHD Campus, BHEL Complex, Trichirapalli, 620014, India, sabari@bim.edu

1 - Exploring the Role of Attitude Functions in Counterfeit Purchase Behavior

Ricky YK Chan, Associate Professor, Hong Kong Polytechnic University, Department of Management and Marketing, Hung Hom, Kowloon, Hong Kong - PRC, msricky@polyu.edu.hk

Prior research on counterfeit purchase behavior does not explain the reasons for the differences in the underlying consumer motivation and decision-making process for different product categories. We address this gap with a new conceptual framework incorporating five attitude functions (value-expressive, social-adjustive, ego-defensive, knowledge and utilitarian) to explore the differences in their direct and indirect influence on the evaluation and purchase intentions for counterfeit products based on varying levels of involvement, consumption context (private vs. public) and purchase motivation (hedonic vs. utilitarian). We found support for most hypotheses using a large-scale mall-intercept study with shoppers in Hong Kong (a popular market for both genuine and counterfeit brands) using four different counterfeit products. We discuss the conceptual contribution as well as managerial and socio-psychological implications of our findings.

2 - The Role of Critical Life Events for Old-age Mobility

Matthias Pannhorst, University Viadrina Frankfurt (Oder), Grofle Scharrnstrasse 59, Frankfurt (Oder), 15230, Germany, pmatthias@gmx.de, Florian Dost

An aging society will increasingly force marketers to adapt to the specific needs of older consumers. The role of mobility in older age poses some particular challenges: First, an active and mobile lifestyle is increasingly associated with successful aging and satisfaction. Second, with increasing age mobility limitations become more likely yielding far-reaching implications – like personal dependence, social insulation or the reduction of consumption activities – for older people, and thus also for marketers. This paper takes a multidisciplinary approach focusing comprehensively on life events that affect mobility behavior in old age, including physiological events (e.g. onset of disease or frailty) as well as psychological and social events (e.g. cognitive decline or loss of a spouse). In a first step, we establish which life events most strongly affect mobility in old age. This first analysis is based on semi-structured interviews from a sample of people aged 60 years and above in an urban area in Germany. It provides a comprehensive set of events, clustered into positively, negatively or not at all affecting mobility. Second, these events are tested for reliable predictions of changes in mobility behavior, allowing for non-linear effects as some events could spark a mobility increase after a previous decline. Third, we provide guidelines on how longitudinal data can be used to more easily identify the most relevant events. The study results will help to adequately tailor and target services to the specific mobility needs of an aging consumer.

3 - The Effect of Framing in Multi-alternative Choice

Soyoung Lee, Professor, Hoseo University, #606,1406-10, Seocho 3dong, Seocho Gu, Seoul, Korea, Republic of, claire@hoseo.edu, Hyangmi Kim

Bundling of products/services customized to the customer's individual need is prevalent in the marketplace. For example, Mobile carriers are offering diverse rate plans based on the customer groups' usage pattern and General Hospitals are offering diverse health check up programs. Choosing one option from an assortment requires trade-off across multiple attributes. So, the process of choosing the best alternative from a larger set is much more complicated than that of evaluating a single alternative to select or reject. The complicated choice process can make the customers hard to decide which can cause purchase delay or hesitation although the bundling products/services are designed to maximize the customer value. On the basis of mere categorization effect, response compatibility hypothesis, regulatory focus theory, this study examines the impact of framing on customer's choice in multi-alternative set and analyzes the manner in which he/she selects or rejects an alternative. The data obtained from 3 experiments shows the following: (1) Mere categorization of the attributes of an alternative positively influences the evaluation of the customers (2) Customers focus on the positive attributes in selection task however, in rejection task, he/she focuses on the negative attributes (2) Customers are not influenced by prevention focus framing when he/she selects an alternative, however he/she is not influenced by promotion focus framing when he/she reject an alternative. Understanding the underlying cognitive processes of choosing and rejecting in multiple- alternative can help marketers to create effective framing strategies for the bundle products/services.

4 - Study on Influence of Family as Moderator on Repeat Purchase of Green Products in Indian Context: BLT

Sabari Raghaven Prasanna Venkatesan, Assistant Professor, Bharathidasan Institute of Management, MHD Campus, BHEL Complex, Trichirapalli, 620014, India, sabari@bim.edu

The paradigm has just begun to shift towards Green. Green (er) products are starting to occupy shelf space in the market. Stakeholders from various quarters have started insisting for green (er) products since last decade. In the light of this emerging paradigm, it becomes essential to understand how consumers behave during purchase and post purchase situations. Now that India has become an Information Technology (IT) hub for the world, the study targets unmarried young executives working in IT companies who are living together with their parents and (or) other elders. The complexity of consumer behavior increases in a family setting, where the buyer of the product also gets to have feedback about the purchase. This study is undertaken to understand if "Family Influence" acts as moderator in consumer buying behavior, especially in repeat purchase decisions on Green consumer products. This study anchors with Behavioral Learning Theory, which provides relevant theoretical insights about repeat purchase behavior in situations with cognitive dissonance: post purchase situations with negative feedback from family members about the product. This study contributes by finding the significant moderating effect of Family Influence on repeat purchase. Analysis of Dyadic data also signifies the influence of Family Influence on repeat purchase. The study concludes through pointing specific communication methods that are more effective for educating elders in the family on green products.

Friday, 8:30am - 10:00am

■ FA01

Room E130 (Aud.)

The Long and Short Run Effects of Strategic Trade-Offs in Firm and Consumer Decisions

Cluster: Special Sessions

Invited Session

Chair: Ahmed Khwaja, Professor, Yale University, New Haven, CT, United States of America, ahmed.khwaja@yale.edu

1 - When to Haggle, When to Hold Firm? Lessons from the Used Car Retail Market

Guofang Huang, Carnegie Mellon University, Pittsburgh, PA, United States of America, gfhuang@andrew.cmu.edu

Though haggling has been the conventional way for auto retailers to sell cars, the last two decades have witnessed the systematic adoption of no-haggle prices by many large dealerships, including the largest new car and used car dealership chains. This paper develops a structural empirical model to estimate sellers' profits under posted price and haggling, and investigates how market conditions affect sellers' optimal pricing formats. The model incorporates a simple class of bargaining mechanisms into the standard random-coefficient discrete choice model. With the extension, the product- level demand system is estimated using data with only list prices, and the unobserved price discounts and negotiation costs in haggling are also recovered in the estimation. The counterfactual experiments yield a few interesting findings. First, dealers' adopted pricing formats seem superior to the alternative ones. Second, dealers enjoying larger market power through vertical differentiation and carrying a large number of models are more likely to have posted price as their optimal pricing format.

2 - Market Share Dynamics, Size Spillovers and Industry Structure: Evidence from Hamburger Chain Expansion

Ahmed Khwaja, Professor, Yale University, New Haven, CT, United States of America, ahmed.khwaja@yale.edu, Jason Blevins, Nathan Yang

The decision of a firm to expand or contract is inherently dynamic with long term implications for not only its market outcomes but also industry structure and evolution. Using data on the Canadian fast food industry from its beginning in 1970 to 2005, this paper develops and estimates a dynamic oligopoly model in which firms choose to expand or contract and firm size is endogenous. Size, in turn, has spillovers on a firm's future market outcomes and thereby on its relative dominance, industry evolution, and market structure. The model allows for heterogeneity in the dynamic link between firm size and future market outcomes, e.g., some firms may continue to remain successful as they grow while others may falter, through a firm-specific unobservable that incorporates the spillovers of current firm size on future chain profitability. This seemingly intractable dynamic game with a serially correlated firm specific unobserved component of profitability that is endogenous to firm size is estimated by extending the Bajari, Benkard and Levin (2007) two-step estimation method to incorporate a particle filter procedure to account for such unobservables. There is evidence of spillovers of firm size on future market outcomes, market dominance and industry structure. More importantly, there is heterogeneity across firms in these spillovers and in organizational forgetting. McDonald's doesn't have the largest spillovers but it has the lowest level of organizational forgetting, and its dominance is generated by this dynamic linkage. The results suggest that market dominance is attributable not only to size spillovers but also the ability to retain (and not forget) these gains over time.

3 - Service Quality Variability and Termination Behavior

S. Sriram, Assistant Professor, University of Michigan, 701 Tappan St., Ann Arbor, MI, 48109-1234, United States of America, ssrira@umich.edu, Pradeep Chintagunta, Puneet Manchanda

While researchers have documented a positive relationship between the average quality of a service and customer retention, the effect of variability on customer retention has been viewed more ambiguously in the literature. We investigate the roles of the level and variability in quality in the context of a new video on demand service in driving customer retention. We find that while high average quality helps in retaining customers, high variability leads to higher termination rates. Apart from these main effects, we empirically document the presence of an interaction effect between average service quality and its variability on termination rates; customers who experience low variability are more responsive to mean quality compared to those experiencing high variability. As an extreme outcome, at the lower end of the quality spectrum, customers experiencing high variability have a higher retention rate than those experiencing low variability; this is contrary to what the main effect of variability would imply. We postulate a mechanism involving risk aversion and learning, which can induce this interaction effect and test this against several alternative explanations. Our results reinforce the notion that high service quality is associated with lower termination rates. Moreover, our estimates suggest that households exhibit risk aversion, implying that, on average, variability increases termination. Based on the model and estimation results, we document that in the context of new services where customers are likely to learn about their quality, households that experience low variability in service are likely to be more responsive to the quality level. This differential responsiveness results in an interaction effect between service quality level and its variability. In terms of managerial implications, we show that while increasing the average quality might be effective in retaining customers at low quality levels, lowering variability is likely to be more appropriate at high quality levels.

4 - A Dynamic Model of Online Search

Hema Yogana, Assistant Professor, University of California-Davis, Gallagher Hall, 3204, Davis, CA, 95616, United States of America, hyoganarasimhan@ucdavis.edu

Online search or information retrieval is one of the most common activities on the web. Over 500 billion searches are made each day, and search generates over $40 billion dollars in revenues. We present a single agent dynamic model of online search in continuous time. In our model, the agent solves a dynamic optimization problem wherein, at each decision point, she has the option of issuing a new search query, clicking one of the existing results, or ending the search. While doing so she faces uncertainty on the value of clicking on a results page or issuing a new query. Thus, she trades off the immediate cost of clicking or issuing a new query with the potential benefit of additional information. We estimate the model on data from a premier web search engine, and infer the two types of search costs associated with online information retrieval — click costs and query costs.

■ FA02

Room E208

Path to Purchase Models I

Cluster: Special Sessions

Invited Session

Chair: Stephan Seiler, Stanford University, San Francisco, CA, United States of America, sseiler@stanford.edu

1 - Product Assortment Competition and Online Search Behavior

Nathan Fong, Assistant Professor, Temple University, Philadelphia, PA, United States of America, nmfong@temple.edu

Online search environments allow customers to more easily compare assortments across multiple sellers. How do the sellers' product assortments affect the sequence of customer information search? We test several predictions using click stream data from a website that displays beer lists for over 100 bars in a metropolitan area. If incremental search costs are smaller within a seller than across sellers, offering a large assortment may prevent search for better alternatives from other sellers. However, the preemptive effect of a large assortment should exhibit decreasing returns, as a large assortment can increase search and inspection costs within a seller's offerings. The marginal benefit of searching another seller's offerings also varies with the degree of overlap with other sellers' assortments. A low degree of overlap means that searching across sellers is more likely to provide new options. However, a high degree of overlap can lead customers to search on other dimensions, such as location. In the empirical example, conditional on continuing to search, a user is more likely to search for beers or beer styles after viewing a low-overlap seller, whereas a user is more likely to search based on location after viewing a high-overlap seller. Thus, we show how a seller's product assortment affects the duration and trajectory of search.

2 - Does Purchase Without Search Explain Counter-cyclic Pricing?

Avery Haviv, University of Toronto, Rotman School, Toronto, ON, Canada, avery.haviv09@rotman.utoronto.ca

Basic economic theory tells us to expect that an increase in demand should lead to an increase in price. However, previous studies have found the opposite trend in the prices of seasonal goods, such as canned soup. I propose an explanation of this phenomenon: consumers are more likely to purchase without search in low demand periods, reducing the gains of temporary price reductions, and decreasing estimated price sensitivity. Purchase without search is consistent with consumers using shopping lists to make their purchase decisions before observing prices. I test this explanation using a novel dynamic, structural inventory model where consumers make decisions on whether to search, which reveals price promotions, and which products to purchase given their search decision. Estimating this model using previous methods is a computational challenge because of the expansion of the state space required to model seasonal preferences. To overcome this challenge, I develop a cyclic-successive approximation algorithm, which removes the computational burden of adding cyclic variables to the state space of a dynamic model. I find that consumers purchase without search 61% of the time in winter, and 82% of the time in summer. This causes price elasticities that are twice as large in winter as they are in the summer. I find that the dominant cause of seasonal search is seasonal consumption preferences, rather than seasonal price variation.

3 - Consumer Search: Evidence from Path-tracking Data

Stephan Seiler, Stanford University, San Francisco, CA, United States of America, sseiler@stanford.edu, Fabio Pinna

We estimate the effect of time spent searching in a supermarket on consumers' expenditure. The analysis is implemented using a unique data-set obtained from radio frequency identification tags which are attached to supermarket shopping carts. This allows us to record consumers' purchases as well as the time they spent in front of the shelf when contemplating which product to buy, giving us a direct measure of search effort. We estimate the effect of extending search on the price consumers pay within a category while controlling for a host of confounding factors such as category-level price variation over time and measurement error. Our results show that an additional minute spent searching lowers category-level expenditure by $1.40. Extending search-time by one standard deviation allows consumers to appropriate 8 percent of the possible category-level price savings.

■ FA03

Room E204

Consumer Health & Nutrition

Contributed Session

Chair: Tirtha Dhar, Assistant Professor, University of Ontario Institute of Technology, 2000 Simcoe Street North, Oshawa, ON, L1H7K4, Canada, tirtha.dhar@uoit.ca

1 - Consumers' Individual Response to Nutrition Labeling – A Study with Supermarket Scanner Data

Ossama Elshiewy, University of Goettingen, Platz der Goettinger Sieben 3, Goettingen, Germany, oelshie@gwdg.de, Yasemin Boztug

Nutrition labeling is considered as a helpful tool to promote healthier food consumption. Despite the public attention the topic has received over the last years, research is still short of evidence about the effectiveness of nutrition labels in real-life settings (Hersey et al. 2013; vant Riet 2012). One major limitation of previous studies based on real purchase data is the utilization of aggregated data. The response to nutrition disclosure has to be considered heterogeneous among consumers. While, in general, nutrition labels are intended to decrease consumption of unhealthy nutrients, increased consumption is often discussed as a possible outcome (see, e.g. Burton et al. 2009). If different response patterns occur simultaneously an aggregation of all consumers will mask significant effects of nutrition labeling. Our study aims to fill this gap by analyzing individual purchase sequences to investigate consumer-specific response to nutrition labeling. We utilize scanner data with purchase transactions from loyalty card users two years before and after the label introduction. Previous studies have analyzed changes in sales or market share of food products over time. Our approach analyzes the food energy volume purchased by individual consumers of different food products over time. This disaggregated measure is more likely connected to healthier purchase behavior than changes in sales or market share. This leads to three levels of units which are considered in our model. The levels are consumers, products and time periods. We estimate consumers' individual response to the label introduction with a multilevel modeling approach. This allows us to account for heterogeneity among the three levels of units while testing the impact of the label introduction.

2 - Taste vs. Health Dilemma in Product Choice Decision

Satheesh Seenivasan, Monash University, Department of Marketing, Level 7 Building S, Caulfield East, 3145, Australia, satheesh.seenivasan@monash.edu, Dominic Thomas, Adwait Khare, Anish Nagpal

We investigate the interplay between taste and nutrition content in driving consumers' product choice decision in the context of consumer packaged goods (CPG) industry. Using product taste ratings from consumer reports, nutrition information from nutrition panels and scanner panel data from IRI marketing data set, we investigate whether taste and nutrition content have an impact on consumers' product choice decision after accounting for marketing mix variables and brand loyalty across several CPG categories. We also examine the relative impact of different nutrients such as fat, sugar etc. on choice decision and test whether their impact is moderated by product taste. We use hierarchical logit choice model and analyze differences in the impacts of nutrition content and taste across consumers with heterogeneous product preferences, purchase habits and demographics. Our findings have significant public policy implications.

3 - Do You Diet by Drinking Diet Drinks? – An Empirical Study of Food and Drink Choices at Restaurants

Tirtha Dhar, Assistant Professor, University of Ontario Institute of Technology, 2000 Simcoe Street North, Oshawa, ON, L1H7K4, Canada, tirtha.dhar@uoit.ca, Sina Ghotbi, Charles Weinberg

Diet drinks as a functional food has been introduced to help consumers to lower their caloric intake in a meal. Critics in recent years have suggested that these drinks are in fact harmful to consumers as they can use these drinks as a 'crutch' to consume more calories. In this paper, we use a novel panel dataset from Canada (2002-2007) to study the effects of drink choices on overall caloric intake at a major fast-food chain (McDonald's). Detailed meal specific individual level daily food and drink intake data help us to estimate differences in caloric intake conditioned on the choice of drinks (i.e., regular vs. diet carbonated soft drinks (CSD)) and size (i.e., small, medium and large) by consumers. We estimate the difference across different demographic groups by treating choice of different sizes of diet or regular drinks as treatments and using econometrics of heterogeneous treatment effects estimation techniques. The within subject design of our estimated model helps us avoid some of the usual endogeneity concerns in estimation due to self-selections in drink type and size. While we did not find significant overall effect of drinks choice on caloric intake from food, the estimated effects varied significantly by demographic groups. In terms of gender and age, young male consumers tended to consume more calories from food when they drank diet than when they drank regular CSD. On the other hand, middle aged female consumers consumed significantly lower calories in food when they chose regular over diet CSD. Overall, we find significant net benefits (i.e., lower total calories from food and drink in a meal) from the availability of diet drinks even though young male consumers over consumed on food when they chose diet CSD. This is because, in a counterfactual scenario, over-consumption of calories was mitigated by the benefit of forgone calories in a regular drink.

■ FA04

Room E201

Mobile Commerce

Cluster: Special Sessions

Invited Session

Chair: Minha Hwang, McGill University, Desautels Faculty of Management, Montreal, QC, Canada, minha.hwang@mcgill.ca

1 - Predicting Mobile-Commerce Adoption from Past Browsing and Shopping Behaviors at e-Commerce

Minha Hwang, McGill University, Desautels Faculty of Management, Montreal, QC, Canada, minha.hwang@mcgill.ca, Kunsoo Han, Animesh Animesh, Youngsok Bang

In this study, we predict mobile channel adoptions of e-marketplace users with their browsing and purchasing behaviors at the e-marketplace before its addition of the mobile channel. Analyzing a data-set from a large e-marketplace in South Korea that introduced mobile channel to its existing online channel reveals that access and search behaviors before the mobile channel addition could be good predictors for the mobile channel adoption. Specifically, order time dispersion (behavioral proxies of needs for anytime access) is negatively related to the time to adopt the mobile channel, whereas the ratio of orders followed by keyword or category search, the mean number of product classes per order, and the mean display ranks of orders (behavioral proxies of needs for active search, search breadth and search depth, respectively) are positively related to. In addition to access and search behaviors, we considered information privacy related behaviors, transaction risk related behaviors, assurance seeking behaviors, and order preferences on time, day, and product categories. Finally, we develop a scoring rule, which can be used to target customers who are more likely to adopt mobile commerce based on their past transaction/browsing behaviors at e-commerce sites. Our findings shed new lights on the adoption research stream by demonstrating a prediction of a new IT adoption of individuals based on their past behaviors. We also contribute to the emerging literature on mobile commerce by identifying significant predictors for the mobile channel adoption.

2 - Subway Crowdedness and Mobile Purchases: Evidence from Randomized Field Experiments

Michelle Andrews, PhD Candidate, Temple University, 1801 Liacouras Walk, Philadelphia, PA, United States of America, michelle.andrews@temple.edu, Xueming Luo, Zheng Fang, Anindya Ghose

Mobile technologies can provide novel measures of crowd density. This paper shows that consumers in crowded subway trains are more receptive to mobile promotions. On the basis of randomized field experiments with a short message service (SMS) sent to 10,690 mobile users, we find that crowding positively affects mobile purchase likelihood. On average, one unit increase in crowdedness can generate a boost in the odds of mobile purchases by 12.1%, ceteris paribus. Compared to a baseline of 1.96 passengers/m2, when crowdedness increases to 4.02 passengers/m2, the marginal mean probability of purchases increases by 16%. At a higher level of crowdedness with 4.97 passengers/m2, purchase likelihood jumps 46.9%. Our finding is robust to a subsequent natural experiment with exogenous crowding that is impacted by a temporary traffic control. This intervention above-ground created a natural spike in subway crowding below-ground. The traffic control thus not only reduces self-selection but also more precisely identifies that purchases are driven by crowding variation rather than commuter heterogeneity. Follow-up telephone surveys by the corporate partner reveal a chained psychological process: crowdedness ? mobile immersion ? involvement ? purchase. That is, consumers cope with the loss of personal physical space in crowded trains by escaping into their personal mobile space, which leads to higher consumer involvement with mobile devices and SMSs and thus more purchases. To marketers, mobile crowdsensing is a new way to target consumers for effective marketing campaigns.

3 - An Empirical Analysis of Mobile App Time-use: Are Facebook and YouTube App Use Complements or Substitutes?

Sungho Park, Assistant Professor of Marketing, Arizona State University, P.O. Box 874106, Tempe, AZ, 85287-4106, United States of America, spark104@asu.edu, Sang Pil Han, Wonseok Oh

The rapid adoption of smartphones and tablets, as well as the widespread use of mobile applications, has fueled the growth of the mobile app economy. In this study, we use a unique panel data set detailing individual-level mobile app time-use and build a utility theory-based model for multiple discrete/continuous choice of app use. We quantify the baseline utility and satiation levels of different mobile app categories and examine how these vary with user demographics. To allow for category (dis)similarity in unobserved attributes, we employ a factor analytic structure in our multiple discrete/continuous model. We discuss the implication of our findings in the context of optimal media planning in the app economy.

■ FA05

Room E231

Online Advertising I

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Raji Srinivasan, University of Texas at Austin, McCombs School of Business, Austin, TX, United States of America, Raji.Srinivasan@mccombs.utexas.edu

1 - Allocating Spend on Digital Display Advertising: Investigating Attributable ROI

Nazrul Shaikh, Assistant Professor, University of Miami, 279 McArthur Engineering Building, Coral Gables, FL, 33146, United States of America, n.shaikh@miami.edu, Mahima Hada

With consumers increasingly consuming media digitally, manufacturing and media firms have made some structural changes to their marketing mix allocation. Firms have increased spend on digital media by 13.5% over the last year, and specifically on pre-roll advertising. We investigate the effectiveness of this change in media spending. We present findings from analyzing firm's media spend over two years in two distinct industries – service and consumer products. Using detailed weekly transactional data combined with information on all the multimedia (both online and offline) communications used by a firm, we estimate the efficacy of digital display advertisements in driving customer traffic and sales. We find that while digital display media can provide high return of investment, the faster saturation rates of digital display media suggests lower spend ceilings. For a marketer, the implications of our findings are two folds; first, the high retention rate and early saturation demands customized media plans which are different from static banner ads; second, the message conveyed through pre-roll advertisements, when supported by appropriate key word selections (for paid search) has additional synergistic effects. As such, our findings can help marketers to identify the optimal levels of execution and mix of pre-roll advertising within their overall online advertising and thereby improve online effectiveness and ROI.

2 - Analyzing the Options and Interactions between Internet Users,Online Advertisers, and Search Engine

Ming Cheng, PhD Candidate, Rutgers Business School, 1 Washington Park, Newark, NJ, 07102, United States of America, ming.cheng@rutgers.edu, Christopher Anderson, S. Chan Choi

This research seeks to produce new insights into the dynamics underlying search-engine advertising, through an examination of the operational interactions between Internet-users, online-advertisers, and search-engine providers. In this research, we first examine the relationship between Internet-user queries and click behavior. We then explore the response to an assortment of paid advertisement screen arrangements in relation to consumer search phrases. Lastly, we investigate the issue of how advertisers might effectively assign monetary resources to various keyword patterns across the customer search and conversion path. The methodology entails analyzing "the breadcrumbs" produced by the search and click data from one of China's leading search engines. Overall, the goal of the research is to produce empirical insights to improve decision making by search engine providers and advertisers in order to advance search engine marketing as a discipline and to contribute to its growing body of literature.

3 - Optimizing a Menu of Multiformat Subscription Plans for Ad Supported Media Platforms: A Model and Application in the Daily Newspaper Industry

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Today, many news corporations are putting up paywalls on their digital channels. Subsequently, they are offering their readers a menu of multiformat subscription bundles where each bundle or plan includes access to a print version (e.g., 7 day or Sunday only delivery) and/or digital news at a certain price. By so doing, newspapers hope to increase revenues from both the print and digital news formats. The offer of a menu of subscription bundles recognizes that newspaper readers are heterogeneous in their preferences for news consumption via different formats. However, developing the optimal menu that maximizes total revenues from both sides of the newspaper platform is a complicated problem, not yet addressed in the marketing science literature. Against this backdrop, the authors propose and demonstrate an implementable model-based approach that can aid in optimally designing and pricing a menu of multiformat news subscription plans. Specifically, the authors incorporate choice-based conjoint analysis estimates of readers' format and version preferences and transaction data-based estimates of advertisers' demand function in a mixed-integer nonlinear programming model. This model can be used to derive the subscription plus advertising profit maximizing size, composition, and prices of multiformat subscription plans comprising the menu. The model is demonstrated for a U.S. newspaper offering subscriptions to various combinations of its online and print format versions, e.g., 7 day or Sunday home delivery. Profit maximizing reader and advertiser offerings are determined and various competing offerings, including the one currently being offered by the focal firm, are evaluated and discussed.

4 - Consequences and Antecedents of Online Information Search: Insights from Super Bowl Advertising

Raji Srinivasan, University of Texas at Austin, McCombs School of Business, Austin, TX, United States of America, Raji.Srinivasan@mccombs.utexas.edu, Deepa Chandrasekaran, Debika Sihi

With the advent of Internet search engines, online consumer information search is emerging as a key mechanism by which a firm's consumers engage with the firm. In this paper, we examine performance implications of online information search and the factors influencing this search. Using the context of Super Bowl advertising for the period between 2004 and 2012, we find that online information search following Super Bowl advertising substantively increases firms' abnormal stock returns. Following that, we develop a model and hypotheses relating characteristics of product advertising to online information search. Specifically, we propose that elements of interactivity (call to action, website pointer, and duration of website pointer) of the advertising increase online information search, and also moderate the influence of product curiosity on search. Evidence from a database of 774 commercials supports the hypotheses and proposed framework. The findings generate managerial implications for content engineering to increase consumer engagement.

■ FA06

Room E234

Social Influence II

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Ashish Agarwal, University of Texas-Austin, 9624 Rainlilly Lane, Austin, TX, 78759, United States of America, ashish.agarwal@mccombs.utexas.edu

1 - Does Offline Brand Advertising Affect Online Conversations?

Abhishek Borah, Assistant Professor, University of Washington, 485 Paccar Hall, Box 353226, Seattle, WA, 98195-3200, United States of America, abhi7@uw.edu, Gerard Tellis

Increasingly, advertisers believe that offline advertising is far less effective than it used to be. However, ignoring the effects of offline advertising has its own perils. Unlike online advertisements, the creatives of offline advertisements are elaborate and rich in information amplified by the use of affect laden content and argument (Tellis 2004). Thus, potential buyers may respond to the content and arguments. Indeed, offline advertising may prompt viewers to express their thoughts and feelings about the brands online. Moreover, advertising relative to user generated content may have a negative impact on affecting consumer perceptions. For example, Clemons (2009) argues that any form of advertising with a message to potential customer may fail because consumers have low trust in advertising messages from commercial entities. Thus, there is increasing skepticism in offline advertising with a suspicion that offline advertising is divorced from online conversations. This research has two goals. First, it attempts to understand whether offline advertising for a brand plays any role in affecting the sentiment of online conversations. Second, it analyzes how the type of offline ads affects the sentiment of online conversations. We collect hourly level data (TV advertising & conversations from blogs, reviews, and forums) for 470 days for 15 brands in the automobile industry. We find that TV ads increase positive sentiment in online conversations. Brand-building & promotional ads increase positive sentiment while apology ads about product recall hurt positive sentiment. 30 second TV ads work best while less than 30 second ads have no effect. These effects wear-in by the 2nd hour & die down by 6th hour.

2 - The Role of Brand and Category Intangibles in the Virality of Tweets

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Social networks have emerged as an important channel for brands to communicate with customers both directly as well as virally through customers who share the communications with others. The value of this channel to brands, therefore, depends on how effective they are in generating virality. This is the issue that we investigate. Specifically, we focus on whether brands and product categories differ in how viral their communications are. Thus, for instance, we are interested in understanding whether postings by a brand like Ford are shared more or less than those by Toyota, and whether postings in the automobile category are as likely to be shared as those in the airline category. We investigate the number of retweets of more than 14000 tweets by 62 brands across four product categories over periods ranging from 18 to 400 days on Twitter. We characterize brands in terms of their popularity on Twitter and Facebook as well as whether they are active in eight other large social media platforms like Google+, Instagram, Tumblr, and Pinterest. We also account for tweet-characteristics such as the number of words, length, presence of hyperlinks, and the day of the week and the time of the day of the initial posting. Our empirical analysis is based on a hierarchical Poisson-Lognormal model, which also includes random effects to control for brand heterogeneity. Our results suggest that, although the extent of brands' presence in various social media plays a role, intangible characteristics of brands, as captured by the random effects, affect virality. Product categories also differ substantially in whether retweets occur. We explore the intangibles across brands and categories and present the managerial implications of these findings.

3 - Scandals and Reputational Spillover: Collateral Damage or Benefit?

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Scandals can have a deleterious impact on customer-brand relationships. From product safety recalls to socially unacceptable remarks made by executives, such events draw reactions from customers and investors. Scandals, however, may have ripple effects beyond the brand involved. These spillover effects may be either positive or negative. In this research, we investigate how a scandal affects the public's perception of a human brand, as manifested in the sentiment of social media conversations. In addition to examining how the scandal affects perceptions of those directly involved, we also study the reputational spillover effect by capturing the scandal's impact on human brands that are not associated with the scandal. We posit that the extent of the reputational spillover will depend on how similar an individual is to those involved in the scandal. As our empirical context, we investigate the 2013 Biogenesis Clinic scandal involving the use of performance enhancing drugs (PEDs) in Major League Baseball. Treating each player as his own human brand, we employ a hierarchical Bayesian model that enables us to estimate individual-level effects of reputational spillover generated by those players named in the PED scandal. Our results show that the sentiment expressed in social media for players named in the PED scandal experiences a short-term decline. We also find evidence of both positive and negative reputational spillover effects for those not named in the scandal. These results suggest that such transgressions have an impact beyond the brand involved in the scandal. From the perspective of human brands, our work shows that individuals' brands are susceptible to the actions of others and, more broadly, brands should be vigilant about the actions of their competitors.

4 - Social Advertising: When Does it Work?

Ashish Agarwal, University of Texas-Austin, 9624 Rainlilly Lane, Austin, TX, 78759, United States of America, ashish.agarwal@mccombs.utexas.edu, Kartik Hosanagar

Social Advertising holds the promise of improving targeting of individuals using the social cues. This study evaluates the role of ad placement and the strength of the social signal on the performance of social ads for brand promotion. We use the ad campaign data from field experiments on Facebook for 2 different advertisers and analyze the click performance of social ads vis-à-vis regular ads. We find that the regular ad performance is higher for newsfeed ads as compared to ads appearing on the right hand side. However, the performance of social ads is the best for ads appearing on the right hand side. We also find that the performance of social ads decreases as more friends connect with these ads. Our results inform advertisers on how the social influence impacts the performance of their ads and how they should advertise on social platforms such as Facebook. Our results also provide insight into consumer behavior in social networks. Specifically we show that consumers may find social ads intrusive when these are made visible. Additionally, consumers are less likely to be associated with an ad once many friends have already connected with the ad.

■ FA08

Room E304

Advertising Effectiveness III

Contributed Session

Chair: Florian Dost, Professor, European University Viadrina, Grofle Scharrnstrasse 59, Frankfurt (Oder), 15230, Germany, dost@europa-uni.de

1 - How Advertisement Size Affects Perceived Quality of a Brand: An Experimental Approach

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The relationship between the perception of high advertising expenditures and high brand quality was established in the seminal work of Nelson (1970), who developed models using the expense of the ads as a sign of quality. However, what it is not clear is which signals use consumers to perceive the advertising expenditure. In this paper we consider ad size as a signal of ad spends by the company. There are different theories to explain the importance of advertisement size on perceived quality of brand. Ambler and Hollier (2004) found that advertising works as the 'handicap principle' in biology. This principle states that animals use wasteful biological characteristics that seem to serve no functional purposes to signal their exceptional biological fitness. Similarly, brands use the size and spending on ads as a sign of economic health of the brand. However Kirmani (1990) found that overspending or feeling of wastage could damage their brand perception, as it could be interpreted as a sign of desperation. If we consider the two theoretical propositions together we could synthesize and deduce an inverted U-shaped response to advertising size or expenditure (Kirmani 1997). In this paper, we propose a mixture experiment to find the optimal size of a printed advertisement addressed to a target group. This is a special type of experiment in which the factors are ingredients or the mixture's components, and the response is a function of proportions of each ingredient measured as a size, weight, amount, etc. We present and discuss the findings.

2 - Are Recessions a Curse? Media Selection and Channel Choice for Efficient Resource Allocation

Abhishek Nayak, Doctoral Student, IE University, IE Business School, Calle Maria de Molina 12, Madrid, 28006, Spain, anayak.phd2016@student.ie.edu, Shameek Sinha

Research in marketing on economic cycles has focused on consumption smoothing and impact of marketing instruments. Consumers usually show higher sensitivity to price and lower sensitivity to advertising during recessions. However, extant research does not investigate the effectiveness of media exposures and retail channels on consumer purchases during recessions. The authors investigate variations in consumer purchase intentions and actions across product categories, influenced by changing media exposure and retail channel usage during economic contractions. Combining bi-annual SIMM and monthly CIA survey data from BigResearch Inc. for media, purchases and channels, we undertake a multi-category analysis to understand the effects of recession for alternative shopping scenarios. Heterogeneity in behavior is incorporated using consumer profile data from archival sources. A repeated cross-sectional analysis across 23 media sources and 9 retail channels reveals interesting insights. During recessions, for 'Groceries', Department and Discount stores are the most influential channels while for 'Electronics', Internet is an additional relevant channel. Retail channels for 'Clothing' are Discount, Specialty stores and Catalog while media sources include Direct Mail, Newspaper, Promotions, Email, Billboards, Coupon, Magazines and Online. During downturns, changes in 'Eating Out' habits are influenced by Emails, Magazines, Inserts, Mobile and Online media. While for 'Telephone Services' purchase behavior shows sensitivity to Email, Inserts, Billboards, Promotions, Radio, Newspapers and Magazines and decisions regarding 'Cars' are influenced by Magazines, Radio, Promotions, Emails, Placements, Mobile and Internet.. This changing importance of media sources and retail channels during recessions has significant managerial implications for optimal resource allocation on media selection and channel choice.

3 - Modeling the Mobile Apps Interaction

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With the emergencies and rapid adoption of smartphone, consumers now have more control over the custom design on their cell phone. They can personalize with their favorite apps in their cell phone. At the same time, firms produce multiple substitute apps across categories (e.g., news apps, social networking apps, video sharing apps, etc.). We assess how consumers choose their mobile apps like a portfolio and whether the selection of one mobile app provides a superior value to them to choose the other apps under the same brand. Using data from the telecommunication industry, we develop a model to analyze customers' mobile apps choice. We find that dominant brand in one app category has an influenced on the same brand in seemingly unrelated app category to drive the usage. The apps usage from the same brand is highly associated. Our study concludes by providing guidance for marketers regarding on how to manage a list of mobile apps of the firm in the emerging mobile market.

4 - Direction, Strength and Non-linearity of Causal Marketing Influences in Economic Systems

Florian Dost, Professor, European University Viadrina, Grosse Scharrnstrasse 59, Frankfurt (Oder), 15230, Germany, dost@europa-uni.de

On Time Square or in the streets of Tokyo, on television, or inside of any fridge, marketing is ubiquitous and plays major role in modern economies and societies. But unlike firms or consumers, whose holistic footprints on complex systems are regularly studied, marketing activities and capabilities are seldom studied for their impact on economic and social systems. Furthermore, it is difficult to do so with standard statistical techniques, as marketing activities and capabilities will often interact with economic variables in endogenous and non-linear relationships. This study aims to disentangle the reciprocal effects of marketing and economic factors from the complex systems of modern economies and establish causal relationship webs. To do so, we combine several sources of economic time series and introduce convergent cross mapping (Sugihara et. al, 2012) to marketing science: A state-of-the art, systems-based, non-linear, time-series method, developed to uncover the complex causations in ecological systems. Particularly, we detect the directions and relative strength of causal impacts within the studied system. Additionally, applying a related method, s-maps, we determine a degree of non-linearity for each studied relationship. The results provide a systems view of marketing's "footprint" in modern economies and societies, being helpful for example to policy makers when dealing with regulations concerning marketing activities. For further studies, the causal web and non-linearity results provide valuable information for modelers and econometricians. But first and foremost these results may help marketing scientists to better find and defend their role in business and economic sciences.

■ FA09

Room E301

Platform Competition and Competition in Two-Sided Markets: Empirical Evidence from the Video Game Industry

Cluster: Special Sessions

Invited Session

Chair: Thijs Broekhuizen, Assistant Professor of Strategic Innovation Management, University of Groningen, Netherlands, t.l.j.broekhuizen@rug.nl

Co-Chair: Joost Rietveld, PhD Candidate, New York University, City University London, New York, NY, United States of America, gjr269@nyu.edu

1 - Backward Compatibility in Two-sided Markets

Richard Gretz, Associate Professor, Bradley University, Baker Hall 208, Peoria, IL, United States of America, rgretz@fsmail.bradley.edu, Suman Basuroy

Two-sidedness is a common feature in hardware/software industries. Video games and consoles is a classic example: consoles are the intermediary which brings consumers and video game developers together. Often new hardware is 'backward compatible' with software designed for previous generations of hardware. For example, PlayStation 2 can play games designed for PlayStation. However, empirical studies of two-sided markets have largely ignored the effect of backward compatibility on hardware adoption. We address this issue. Our study contributes to the growing literature on dynamic discrete choice-demand estimation for consumer durables incorporating heterogeneous forward looking consumer who can multi-home (purchase more than one piece of hardware). We extend the methodology to incorporate backward compatible product generations. We apply it using data from the home video game industry on seven consoles and their games spanning two product generations from 1995 – 2005. We use our estimates to obtain the marginal value of console backward compatibility on hardware share. Our results suggest backward compatibility offers hardware firms a significant advantage over non-backward compatible competitors. However, backward compatibility increases the cannibalization of the associated previous generation hardware – an important factor for managers considering profitability throughout the hardware lifespan. Also, we assess the effect of backward compatibility on hardware adoption for different consumer inventories. We find backward compatibility has the greatest effect on non-adopters of the previous generation hardware.

2 - Why Do Firms Release Sequels? A Launch Decision Model with Risk Aversion

Florian Deutzmann, Assistant Professor of Marketing, Erasmus School of Economics (EUR), Netherlands, deutzmann@ese.eur.nl, Dennis Fok, Stefan Stremersch

Many entertainment firms often release sequels, including sequels to titles that were neither blockbusters nor superstars. This paper examines a large set of antecedents that may explain sequel launch decisions. The authors specify a new sequel launch model that allows for risk aversion, which they estimate on a data set of 185 consecutive months of sales, price, advertising and quality for 7,662 unique video games, representing 528 sequel lines. The authors find that entertainment firms release sequels for three main reasons: (1) sequels entail less uncertainty than originals and decision makers are risk averse; (2) sequels, on average, obtain higher quality ratings than originals and consumers become more responsive to quality over sequel lines; and (3) the threshold level of risk-adjusted revenues a publisher demands to launch a sequel decreases over a sequel line, which may indicate decreasing development costs. Our model and findings are of value to publishers, as they decide on sequel launch and marketing instruments for sequels and to platform owners who have an interest in securing sufficient supply of titles for their consoles.

3 - The Effect of Mergers on Product Quality and Portfolio, and Brand Value: Evidence from the U.S. Video Game Industry

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This paper examines the impact of mergers and acquisitions on post-merger product quality and portfolio, and firms' brand values in the U.S. video game industry between 1995 and 2012. Mergers in software industries such as video games and computer software are a prior either supplementary or complementary, depending on the technological expertise of merging firms in software development. Supplementary mergers aim at strengthening merging firms' expertise in a specific area, whereas complementary mergers allow merging firms to diversify their product portfolio. Despite the popularity and importance of these mergers for long-term success of firms, little is known about whether these mergers indeed result in the introduction of more innovative products, a wider variety of products, higher firms' brand values, and/or better market performance. Using rich product- and firm-level panel data on sales, prices, product characteristics (genre, critic/user ratings, award, etc.), firm characteristics (areas of expertise, network ties, etc.), and mergers, we first recover firms' brand values by estimating a dynamic structural demand model. We then investigate (1) factors which influence supplementary/ complementary merger decisions, and (2) the impact of mergers on product quality and portfolio, and firms' brand values. Our analysis provides managerial implications by identifying conditions under which supplementary/complementary mergers lead to better long-term performance.

4 - Signaling in the Video Game Industry: Can Quality Signals Compensate for Too Much Innovativeness?

Thijs Broekhuizen, Assistant Professor of Strategic Innovation Management, University of Groningen, Netherlands, t.l.j.broekhuizen@rug.nl, Joost Rietveld

This study examines how innovativeness and quality signals may impact the success of video game sequels. Using a sample of 519 sequels released on the PlayStation 2 between 2000-2011, it studies the effects of quality signals (e.g., user and critic ratings, awards, star power, media adaptation) and innovativeness (e.g., genre departure, title departure, developer departure and innovation awards) on a sequel's cumulative unit sales. Quality signals are positively associated with sequel success, but no support is found for an inverted U-shape relationship between innovativeness and the success of a sequel. The impact of innovativeness on unit sales is moderated by the strength of the quality signals. High levels of innovativeness are detrimental to sales only for sequels with strong quality signals but not for those with weak signals. Sequels with stronger quality signals face public scrutiny, and are hurt more when deviating from the parent game.

■ FA10

Room E331

Category Management I

Contributed Session

Chair: Erik Bushey, University of Illinois at Urbana-Champaign, Department of Business Administration, Urbana, IL, United States of America, bushey1@illinois.edu

1 - Exploring the Changing Effectiveness of Price and Promotions in Forecasting Retailer Product Sales at the UPC Level

Tao Huang, Lancaster University, Lancaster Center for Forecasting, Lancaster, LA1 4YX, United Kingdom, t.huang@lancaster.ac.uk, Robert Fildes, Didier Soopramanien

Various studies have been devoted to measuring the effectiveness of prices and promotions, which, in reality, may change by exogenous influencing factors (e.g. competition, economic conditions, customer taste, and new product entry). Conventional market response models ignoring this fact and indiscriminately assuming their effectiveness is constant may generate misleading results. For example, these models will be potentially subject to structural breaks and generate biased forecasts. In this study, we investigate this problem for retailer product sales at the UPC level in the FMCG industry. We find that conventional models with constant parameters for prices and promotions are subject to structural breaks for most of the products across multiple categories, regardless of whether the competitive information are included. We attempt to mitigate the problem by constructing models with time-varying parameters for the price and promotions variables. Alternatively, we construct conventional models initially but then compensate the incurred forecast bias using various recently developed techniques including intercept correction and estimation window combining. The results based on multiple product categories show that by compensating the incurred forecast bias we can generate more accurate forecasts. The model with the best forecasting performance is the one with diffusion factors (accounting for the competitive information) and also adjusted by intercept correction (accounting for the changing effectiveness of prices and promotions). The improved forecasts substantially benefit retailers for their inventory management. We also explore the relationship between the performance of the models and the data characteristics of the various products and product categories.

2 - When, and Under What Form, Should a Retailer Involve its Suppliers into the Management of a Category?

Ahmed Timoumi, PhD Candidate, Koc University, Rumeli Feneri Yoly, Sariyer, Is, 34450, Turkey, atimoumi@ku.edu.tr, Skander Essegaier

Retailers and manufacturers tend to form different types of relationships in order to improve the efficiency of the decision-making processes. A channel is a bundle of functions that are executed either by the retailer or the manufacturer. One of these functions is Category Management. Manufacturers usually have more knowledge about categories than the retailer. Many retailers decide to involve their suppliers in managing their categories. This involvement could take the form of full (partial) delegation where the suppliers makes the allocation decision of all (some) category management resources, advisory where the supplier could only advise the retailer on how to manage the category, or arm's length form where the retailer does not involve the supplier. Each form of partnership between the retailer and the manufacturer has its costs and benefits. Delegation (full or partial) gives rise to a risk of supplier's opportunism and advisory partnership might result in misleading the retailer. However, when the retailer does not involve the better informed manufacturer, she forgoes the possibility to benefit from the supplier's knowledge. This knowledge could increase the efficiency of the retailer's decisions. This paper shows that when the retailer's uncertainty level is high enough, the retailer chooses to form partnership (delegation or advisory) with the supplier. Also, the retailer might prefer to delegate rather than to simply seek advice when the supplier has an incentive to mislead the retailer.

3 - Trust in Category Captain Arrangement

Yu Wang, Assistant Professor of Marketing, The University of Texas at Dallas, 800 West Campbell Rd., Richardson, TX, 75080, United States of America, yuwang@utdallas.edu, Upender Subramanian, Özalp Özer

We study a retailer who relies on the market knowledge of a manufacturer designated as the "category captain". We examine channel performance and the firms' profits under three arrangements: information provision, advice provision and limited delegation. While standard theory predicts lack of cooperation, through controlled laboratory experiments, we determine why and how each arrangement generates varying levels of cooperation by inducing different levels of trust and trustworthiness.

4 - The Effects of Store Brands on the Desirability, Implementation, and Profitability

Erik Bushey, University of Illinois at Urbana-Champaign, Department of Business Administration, Urbana, IL, United States of America, bushey1@illinois.edu, Udatta Palekar

Category captainship is the delegation of category management responsibilities to one of several manufacturers in a category. Currently there is a debate on the benefits of category captainship to the different stakeholders within the channel. There are several important ques- tions that arise during the implementation of category captainship. Which manufacturer should be selected, and how, as the category captain (CC)? Which stakeholders within the channel benefit from category captainship? In this paper we develop a game theoretic model to answer some of these questions when a category contains both national brands and a store brand. The presence of a store brand raises several additional questions regarding the optimal implementation of category captainship. Who should produce the store brand? One of the national brand manufacturers (NBM) or a dedicated manufacturer of store brands (SBM)? What are the effects of allowing the SBM to compete alongside NBMs for category captainship? Should the production of store brands be tied to category captainship? We find that when the production of the store brand is not tied to category captainship, selection of the CC is driven primarily by the popularity of the store brand. As this popularity decreases, NBMs find themselves in an awkward position where they must work together to prevent the SBM from securing category captainship, but not by taking on the role themselves. Surprisingly, we find that when the production of the store brand is tied to category captainship, NBMs are able to exclude the SBM from the market, but this exclusion results in increased competition between, and lower profits for, the NBMs. The retailer welcomes this increase in competition, as it maximizes its profit by tying store brand production to category captainship.

■ FA11

Room E334

Sales Force: Organization & Key Accounts

Contributed Session

Chair: Jia Li, Purdue University, 403 W. State Street, West Lafayette, IN, 47907, United States of America, jial@purdue.edu

1 - Unfairness in Key Account Sales Teams: A Behavioral Exploration

Ying Yang, PhD Student, University of Houston, 334 Melcher Hall, C.T. Bauer College of Business, Houston, TX, 77204, United States of America, yyang24@uh.edu, James Hess, Niladri Syam

One of the most challenging problems of key account sales teams is perceived fairness. Typically, a key account sales team consists of a leader, the key account manager, and several team members. Joint activities of these members determine the account's sales volume and success is attributed to the team rather than to individuals. As a result, some team members may feel that their rewards are not commensurate with their contribution to team success: the outcome is unfair. This paper applies principal-agent theory to sales teams, incorporating feelings of unfairness. What drives the key account manager to allocate attention between selling, coaching, diagnosing and guiding? How do feelings of unfairness about the compensation system affect these decisions? We build an analytical model and discover in some circumstances key account manager are unfairly treated still want to help team members who are favored by the unfair compensation. Specifically, we develop two separate models, coaching and guidance model, to analyze key account manager and team members' equilibrium effort decisions when they are compensated by salary and commissions. We measure unfairness aversion and propose a few fairness ideals through surveys, and test predictions of the theory using laboratory experiments. The paper provides insights into key account managers' multiple roles and outlines suggestions for practitioners to alleviate the perceived unfairness in key account sales teams.

2 - Key Account Profitability in Business Markets: Aligning Selling Team Network and Buyer-Seller Network

Aditya Gupta, Doctoral Candidate, Penn State, 406A Bus. Building, Smeal College of Business, State College, PA, 16803, United States of America, agupta@psu.edu, Rajdeep Grewal, Gary Lilien

To manage key account relationships in business markets, suppliers rely on selling teams. The success of such teams is influenced by how the team is structured and how the entire team handles the relationship with the customer account. We use network theory to conceptualize and analyze how the relational ties network within the selling team (within seller network) and the relational ties network with customer representatives (buyer-seller interfirm network) drive the seller's profitability from the account. Using survey data collected from 207 key account managers, we find that account profitability increases when (1) functions represented within the selling team (greater functional diversity within the team) increases, (2) the fraction of buyer-seller relationships between similar functions (more commonality of background in the interfirm connections) increases and (3) the number of selling team members who are centrally connected, (managing the information flow within the team) decrease. We find that account profitability decreases when (4) the number of selling team members who act as information brokers within the team, (controlling the access to information by others in team) decreases. These results indicate how buying and selling networks can be aligned so that both organizations benefit from better quality and flow of information, which leads to improvements in account profitability of as much as 10%.

3 - An Initial Study of the Construct of Entrepreneurial Selling Orientation

Po-Chien Li, Associate Professor in Marketing, Yuan Ze University, College of Management, 135 Far East Road, Chung Li, 320, Taiwan - ROC, pochien@saturn.yzu.edu.tw

This research is to examine a new concept, entrepreneurial selling orientation (ESO), that might be useful for managing and enhancing salespeople's productivity. The ESO consists of three dimensions in this study. A proactive selling dimension refers to the extent to which a salesperson looks for sales opportunities in an active and passionate fashion. A risk-taking selling dimension is referred to the degree to which a salesperson opts to devote the individual's resources to risky, uncertain sales objectives. An innovative selling dimension is defined as the extent to which a salesperson is inclined to adopt unexpected methods and innovative ideas to interact with customers and conduct selling tasks. To test the nomological validity of the construct of entrepreneurial selling orientation, data from a sample of 287 sales respondents were collected. A confirmatory factor analysis was used for measurement purification and the model fits were satisfactory. Meanwhile, results of a path analysis showed that all four antecedents were significantly related to the ESO, which included learning orientation, performance orientation, competitive orientation, and customer orientation. Also, it was found that both ESO and adaptive selling behavior (ASB) were highly related. Finally, while ASB was significantly related to behavior performance and output performance, ESO was related to behavior performance only. The current study suggests that the concept of ESO may be a useful construct to extend the domain of sales recruitment and training research because it appears to be significantly associated with salesperson's job behavior and performance.

4 - Team Composition, Compensation, and Sales Force Performance: A Field Experiment

Jia Li, Purdue University, 403 W. State Street, West Lafayette, IN, 47907, United States of America, jial@purdue.edu, Tat Chan, Lamar Pierce

Sales force performance is critical to the financial success of firms. Yet we know little about how to organize a sales force of often heterogeneous ability and motivation, nor how organizational elements such as sales team composition and compensation structure co-determine revenue and customer service. To address these questions, we conducted a large-scale field experiment in a retailing store. In the field experiment, we randomly assigned salespeople to shifts with their peers, then observed their behaviors and surveyed customers on service quality. This experiment in a true retail environment allows us to explicitly examine the following research questions with the clean identification: (1) Do sales teams with heterogeneous salesperson ability outperform homogeneous teams under team-based compensation systems in terms of revenue and customer service quality? (2) Do sales teams with homogeneous salesperson ability outperform heterogeneous teams under individual-based compensation systems in terms of revenue and customer service quality? (3) What specific cooperative and competitive behaviors are motivated by different compensation systems, and how do these change based on the ability of collocated peers? (4) In addition to classic performance measurements (i.e., sales), what other dimensions such as customer satisfaction and customer retention are influenced by team heterogeneity and compensation?

■ FA12

Room W300

Customer Lifetime Value

Contributed Session

Chair: Eva Ascarza, Columbia Business School, 3022 Broadway. Uris Hall 524, New York, NY, 10027, United States of America, ascarza@columbia.edu

1 - Measuring Customer Lifetime Value in Semi-contractual Setting with Artificial Truncated Duration

Jiayin Qi, Beijing University of Posts and Telecommunications, No.10, Xitucheng Road, Haidian District, Beijing, 100876, China, qijiayin@139.com, Xiang Gao, Rui Cai, Yongpin Zhou

How to measure CLV is a very active research point in marketing science for years. Previously, almost all the CLV measuring model studies are under non-contractual transaction setting or contractual transaction setting, while just one study is done in the setting of semi-contractual transaction in 2008. In this paper, we deal with a special type in semi-contractual transaction setting, in which firms can unilaterally terminate transaction relationship with customers under certain conditions, resulting in artificial truncated customers' survival duration. Our CLV model consists of two sub-models: the customer base analysis (CBA) model and the monetary value (MA) model. In the CBA model, based on BG/BB model and combined with “artificial truncated” feature, we innovatively propose BG-t/BB model. In the MA model, we adopt the classical Gamma-Gamma model. Integrated with two models, we construct the CLV model. The empirical results from the telecommunication industry show that both the CBA model and the CLV model achieve good prediction effects. Moreover, we also simulate the variation trend of customer equity under different truncated duration, so as to help firms to find the optimal truncated duration.

2 - How Firms Can Go Wrong by Offering the Right Service Contract: Evidence from a Field Experiment

Eva Ascarza, Columbia Business School, 3022 Broadway. Uris Hall 524, New York, NY, 10027, United States of America, ascarza@columbia.edu, Raghuram Iyengar, Martin Schleicher

Past evidence reveals that customers make ex-post mistakes when choosing service plans. Fearing a negative impact from customers’ overspending mistakes on long-term profits, some firms are becoming proactive and now recommend optimal tariffs to their existing customers. In this paper, we use a randomized field experiment to examine the profitability of encouraging existing customers to switch to better plans. We find that encouraging customers to switch to cost-minimizing plans can actually harm the firm. The primary source for this negative effect is the change in behavior among customers who decide to reject the firm’s recommendation. For this set of customers, churn notably increases, resulting in substantial losses. We propose two mechanisms for such increase in churn, namely lower inertia and customer regret. Our data provide empirical evidence for both drivers in the context we study. We also explore the impact of hypothetical targeted campaigns. The results suggest that selecting the right customers to target has a higher impact on profitability than allocating customers into optimal tariffs.

■ FA13

Room W330

Innovation I

Contributed Session

Chair: Yansong Hu, Assistant Professor, Warwick Business School, University of Warwick, Coventry, United Kingdom, yansonghu@hotmail.com

1 - Something Borrowed: Borrowed Technology, Knowledge Transfer, and Innovation across Countries

Stav Rosenzweig, Ben-Gurion University of the Negev, Department of Management, Beer Sheva, 84105, Israel, stavro@som.bgu.ac.il, Ayelet Mantzur

What makes some countries more innovative than others? Why do some countries produce little innovation despite investing billions of dollars in R&D? We contend that national cultural aspects are strong determinants of a country’s innovation. Specifically, in countries with little social hierarchy (Hofstede’s power distance) transferring knowledge is a socially desirable act. As a result, inventors share their knowledge with others, and are comfortable relying on others’ knowledge for their own innovations. Consequently, inventors in countries with low power distance borrow ideas and adapt technologies from other domains more than inventors in countries with high power distance. This borrowing and adaptation enriches the innovation process and increases the county’s innovation levels. We examine more than 100,000 pharmaceutical and computation innovations of inventors from 12 countries, who applied for- and were granted-patents in the US over the course of five years. Controlling for country variables such as R&D expenditures, we find that low power distance is positively associated with borrowing and adapting technologies from other domains. This borrowing and adaptation, in turn, is associated with high levels of innovation. We also find that innovation levels increase as cooperation with inventors from other countries increase. We contribute to literature by: connecting between power distance and the borrowing and adaptation of technology; demonstrating that borrowing and adapting is positively associated with innovation; and assessing the positive effect of international cooperation on innovation. We suggest policies for facilitating innovation.

2 - The Impact of Innovation Potential on Marketing Strategy

Martha Tipton, Assistant Professor, Singapore Management University, LKC School of Business, 50 Stamford Road, Singapore, 178899, Singapore, mtipton@smu.edu.sg, Sundar Bharadwaj Guiyang Xiong

Previous research has found that innovation is vital to the viability of firms. Given the criticality of innovation to the firm, it seems logical that managers would use information related to the probability of future product introductions to inform marketing strategies. Yet, the association between innovation and marketing decisions is relatively uncharted. This study seeks to link the two streams of academic research by addressing how the strength of the innovation pipeline of a firm and its competitors impacts the level of risk managers are willing to assume in marketing decisions. Drawing mainly from the principles of prospect theory and competitive marketing strategy, the study presents and tests a set of hypotheses relating the strength of innovation pipelines and managerial risk taking as reflected through deceptive marketing in the pharmaceutical industry. The results from an econometric analysis of a secondary panel data set indicate that multiple facets of innovation have significant relationships with the use of deceptive marketing. The analysis shows that the strength of a firm’s innovation pipeline in a product category and across all other drug categories is negatively related to the use of deceptive marketing for a product. The opposite relationship holds for strength of innovation pipeline of the competitive firms in the category. Patent protection of innovations already introduced to market is also related to the use of deception. Furthermore, we find that some of these relationships are moderated by the extent to which a firm is dependent on the category.

3 - Measuring the Impact of Mergers on Innovation with a Matching Model

Yu Yu, Assistant Professor, Georgia State University, 35 Broad Street, Atlanta, GA, 30303, United States of America, yyu5@gsu.edu, Vithala Rao

Innovation is one of the key motivations for mergers and acquisitions. The existing studies directly link the post-merger innovation performance to merging firms’ attributes, ignoring the complex process of synergy generation involving merger partner selection and merger integration. In this paper, we use a roommate matching model to capture the merger partner selection process and link it the realized merger outcome through an unobserved idiosyncratic strategic fit factor. This two-stage model is used to imply the effect of unobserved integration factors. We apply this model on data for 1,979 mergers that occurred between 1992 and 2008 in 4 high-tech industries. We find that unobserved matching synergy has a significant effect on the post-merger innovation abilities of the combined firms and that this effect peaks in the second year after merger. In addition we identify several differences between the merger partner selection criteria and the impact from these factors on innovation outcomes of firms, reinforcing the effect of unobserved integration factors and management’s failure to fully account for those in the merger planning stage.

4 - Failure and Near Failure in New Product Development and Gains from Alliance

Yansong Hu, Assistant Professor, Warwick Business School, University of Warwick, Coventry, United Kingdom, yansonghu@hotmail.com, Peter McNamara, Dorota Piaskowska

In this research, we explore the conditions under which firms can create value in alliances by considering how the past failure of entrepreneurial firms in new product development (NPD) may affect the value creation in alliances. Specifically, we unpack the impact of failure by distinguishing between three aspects of failure: failure rate in NPD projects, failure experience with partners and near failure experience. We relate the distinctive impacts of these three facets of failure to some of the ways in which firms learn from failures. Our framework reconciles some of the apparent contradictions in earlier empirical studies and extends recent research on innovations and failure by furnishing evidence on some of its positive implications. Furthermore, our findings advance marketing research by uncovering boundary conditions under which a firm can gain from its past failure, suggesting that the different NPD stages of the alliance affect the gains that a firm can extract from this alliance. To demonstrate failure and near failure effects, we adopt the alliance formation event as the unit of analysis, and following a widely used approach, we measure abnormal stock market returns around the time of alliance announcement as an indication of the value created in the alliance. We test our hypotheses with a comprehensive sample of alliances formed among 104 biopharmaceutical firms between 1996 and 2003.

■ FA14

Room W100

Choice Models: Consideration & Variety Seeking

Contributed Session

Chair: B. P. S. Murthi, Professor, The University of Texas at Dallas, SM32 School of Management, 800 Campbell Rd., Richardson, TX, 75080, United States of America, murthi@utdallas.edu

1 - A Structural Model of Satiation Behavior

Xiaoyuan Wang, Texas A&M University, Dept. of Economics, 3035 Allen, College Station, TX, 77845, United States of America, xwang@econmail.tamu.edu, Venkatesh Shankar

In product categories such as yogurt, cereal and candy, consumers are likely to be satiated after frequent consumption of the same brand. This satiation behavior typically leads to intertemporal variety-seeking. We develop a structural model of satiation behavior. We build a satiation threshold component in the model by allowing for prior consumption to negatively affect utility and brand choice. Within (Beyond) the satiation threshold, state dependence (variety-seeking) dominates variety-seeking (state dependence). We estimate the model using data from a consumer packaged goods category, namely, yogurt. The results show that beyond a satiation threshold, consumers systematically switch among brands and that the switching pattern cannot be explained fully by observable characteristics. Our satiation threshold model explains and predicts consumer variety-seeking better than benchmark models. It also better explains firms’ advertising and promotion strategies and offers marketing policy improvements. In addition, we estimate the welfare implications of satiation behavior and show that satiation leads to a welfare loss.

2 - Implications of Variety-seeking Demand on Price Competition

Koray Cosguner, Assistant Professor of Marketing, Georgia State University, 35 Broad Street NW, Suite 1318A, Atlanta, GA, 30339, United States of America, kcosguner@gmail.com, Seethu Seetharaman, Tat Chan

The authors study the effects of variety-seeking on prices in a duopolistic market using a numerical solution of an infinite horizon game by modeling consumer preferences with a logit demand specification. Under their assumed demand specification, they investigate the implications of variety-seeking on manufacturer profits through a series of counterfactual simulations. In their first counterfactual simulation, they study the effects of variety-seeking under different brand preference levels. Their results show that if products of manufacturers are not differentiated enough, both manufacturers' profits decrease as the level of variety-seeking increases. However, if one product is significantly more preferred than the other, an interesting asymmetry emerges. As the level of variety-seeking increases, the more preferred product manufacturer's profit decreases constantly; on the other hand, the less preferred product manufacturer's profit initially increases but then decreases. In their second counterfactual study, they investigate the effect of creating a cost asymmetry on manufacturer profits. They find that, as expected, the manufacturers' profits decrease as their own marginal costs increase. However, surprisingly, in a variety-seeking market, increasing the marginal cost of the competing manufacturer might also hurt the other one. In their third counterfactual study, they investigate the effects of variety-seeking under different price sensitivity levels. They find that, due to the existence of variety-seeking, both manufacturers lose profits more as the market becomes less price sensitive.

3 - Identifying Consumer Inattention: A Product-availability Approach

Kosuke Uetake, Assistant Professor, Yale School of Management, 165 Whitney Ave., New Haven, CT, 06520, United States of America, kosuke.uetake@yale.edu, Kohei Kawaguchi, Yasutora Watanabe

Consideration set models are widely used to incorporate consumer's awareness on alternatives in discrete choice framework. Identification is a prevalent problem in consideration set models because low choice probability can be attributed to either of low utility or low attention. We first show identification of CS models using exclusion restrictions such as advertisement affecting preference but not attention. Because such exclusion restriction is difficult to be satisfied in practical settings, we then propose that product availability can be used as a source to identify consumer preference and inattention separately. Our approach also allows one to measure the effects of menu-specific characteristics as well. Finally, we present the results of Monte-Carlo experiments that quantify how the variation of product availability helps identification.

4 - Two Dimensional Model of State Dependence in Consumption of Snacks

B. P. S. Murthi, Professor, The University of Texas at Dallas, SM32 School of Management, 800 Campbell Rd., Richardson, TX, 75080, United States of America, murthi@utdallas.edu, Ram Rao, Marina Girju, Brian Ratchford

The issue of whether past brand purchase affects current brand choice (state-dependence) has been studied extensively to understand customers' variety seeking behavior in consumer packaged goods. It is also important to study variation in consumption of product categories as opposed to that of brand purchases. Further, an interesting issue is whether consumers exhibit different kinds of state dependence in short- and long- time intervals. We examine this issue in the context of snack consumption choices of individual customers using a rich dataset. In our model, we allow for two types of state dependence – across time periods during the day, and across days. We find that consumers seek variety during the day, but are inertial across days. Our bi-dimensional state dependence model helps to significantly reduce bias. Further, we test how satiation and satiety impact the demand for different snack categories and find that satiation decreases the probability of choice, while satiety increases it.

■ FA15

Room W130

Dynamics: Latent Transition

Contributed Session

Chair: Tanya Mark, University of Guelph, 50 Stone Road, Dept. of Marketing and Consumer Studies, Guelph, ON, N1G 2W1, Canada, markt@uoguelph.ca

1 - Where Did My Customers Go? Modeling Longitudinal Changes in Customer Segment Solutions

Jorge Alejandro, VP Marketing Sciences, Market Probe, 2655 N Mayfair Rd, Milwaukee, WI, 53226, United States of America, j.alejandro@marketprobe.com, Sharon Kim

Marketing professionals often rely on the use of customer segmentation as a way of uncovering groups of individuals that have characteristics in common. Traditionally, this type of analysis is carried out to arrive at a solution that informs the development and execution of targeting strategies. As a general rule, it is desirable for these segment solutions to conform to a set of generally accepted criteria that include being in support of a long-term plan. However, the reality of the business context may allow for customers to migrate between segments over time. By effectively anticipating these transitions, marketing managers can better prioritize action plans that will in turn improve the return on the allocation of marketing dollars. In this research, an extension of mixture models to longitudinal data known as Latent Transition Analysis is applied to provide a better understanding of customer migration in the context of customer segmentation. The insights learned from the utilization of this methodology are used to highlight the managerial implications of the findings. Simulation results along with an applied case study are provided to illustrate the performance of the method.

2 - Dynamics of Customer Transitions between Service Bundles in Retail Telecom Services

Srinivas Reddy, Professor, Singapore Management University, Lee Kong Chian School of Business, 50 Stamford Road, #05-01, Singapore, 178899, Singapore, sreddy@smu.edu.sg, Robert Kauffman, Gwangjae Jung

This research investigates the transition behaviour of customers between different services and bundles of services that a firm offers. The strategic implications of such behaviour in the design and offering of bundles and the impact on customer life time value are explored. Using data on 80,000 subscribers of a telecom services firm over a five-year period, we model the dynamics of transition between the various offerings. Triple-play services, which deliver mobile phone, broadband Internet, and cable TV services together, represent one of the most profitable service bundles offered in the sector. Firms strive to motivate customers subscribed to single services to migrate to triple-play service bundles: it improves retention and lifetime value for these customers. We categorize customers' service subscriptions into 7 states (3 single, 3 double, and 1 triple-play), and derive Markov chain probabilities between the states. Our preliminary analysis suggests different promotion strategies based on customers' subscriptions states. The results show that customers who subscribed to mobile phone services prefer to subscribe to triple-play services directly. Broadband internet and cable TV service subscribers, on the other hand, favour step-by-step upgrades to triple-play services subscriptions. We also see that customers who accepted mobile phone and TV services upgrade to triple-play services faster than other types of customers. We plan to develop a multi-state model to estimate transition intensity between states with explanatory covariates, including the demographics and characteristics of each service bundle. Strategic implications for bundle and promotion design, and churn will be discussed in our presentation.

3 - A Hidden Markov Model of Consumers Information States for In-store Display

Yoonju Han, Indiana University, 1309 E. 10th Street, Room 328, Bloomington, IN, 47405, United States of America, yjhan@indiana.edu, Sandeep R. Chandukala, Shibo Li

Past research on consumer in-store shopping behavior always assumes that consumers have full information about marketing stimuli in the store (i.e., seeing all displays), which may not be valid in many retail settings. In this research, we focus on in-store displays and propose that consumers' category purchase incidences and brand choices depend on two information states of in-store displays: seeing the displays or not seeing the displays. We build a hidden Markov model to capture these two information states and apply the model to account for four types of displays in different locations within the store: store front, store rear, in shelf and secondary locations. We model the dynamic changes to consumers' two information states over time to be impacted by marketing actions of the store (e.g., feature advertisements) and consumers' past shopping behavior. Further, we allow consumer price sensitivity and the effects of own and competitors' displays to vary across the information states. Our proposed hierarchical Bayesian framework accounts for endogeneity and individual heterogeneity and is estimated using a scanner panel data from a large U.S. grocery chain. Results demonstrate the existence of two information states for in-store displays and show that marketing mix variables (i.e., prices and displays) in different information states have differential impacts on consumers' purchase incidence and brand choice behaviors. Managerial implications including the optimization of various displays are explored.

4 - Assessing Channel Choice and the Role of Marketing in a Multi-channel Environment

Tanya Mark, University of Guelph, 50 Stone Road, Dept. of Marketing and Consumer Studies, Guelph, ON, N1G 2W1, Canada, markt@uoguelph.ca, Rakesh Niraj

Retailers are experiencing a dramatic shift in the buying habits of their customers as more customers buy across different channels over the duration of their relationship with a firm. From a firm's perspective, an omni-channel approach to managing customers is of utmost importance because their priority is to capture as many of a customer's purchase occasions as possible. While it certainly is better for retailers to get customers to buy from one of their own channels compared with their buying from a competitor, it will be even better to direct customers to the channel that is the most effective and efficient to serve their needs. Consequently, we argue that as more information on cross-channel purchasing behavior becomes available, marketers need models that utilize these data in order to make marketing decisions that nudge the consumers to the "best" channels to serve them over time. We develop a dynamic model of channel choice and purchase frequency while simultaneously accounting for customer heterogeneity, the various stages of a customerfirm relationship, and responses to a marketing activity. We extend the classic hurdle model by introducing a hidden Markov process to accommodate unobserved customer heterogeneity in patterns of both channel choice and purchase frequency. We find differential effects of direct mail on purchasing behavior. For customers with infrequent buying patterns, direct mail increases the likelihood of a purchase via the telephone channel. In contrast, active customers receiving direct mail catalogs are more likely to make additional purchases across multiple channels. Our research contributes to the growing literature on how firms can influence purchasing behavior through different channels beyond a customer's first purchase.

Friday, 10:30am - 12:00pm

■ FB01

Room E130 (Aud.)

Reprise of the ISMS-MSI Gary Lilien Practice Prize Competition Presentations

Cluster: Special Sessions

Invited Session

Chair: P. K. Kannan, Ralph J. Tyser Professor of Marketing Science, University of Maryland, Robert H. Smith School of Business, College Park, MD, United States of America, pkannan@rhsmith.umd.edu

Chair: Gary Lilien, Pennsylvania State University, 468 Business Building, University Park, PA, United States of America, g5l@smeal.psu.edu

1 - Repositioning Kmart: This Time with Feeling – Kmart Australia

Ken Roberts, Forethought Research, Melbourne, Victoria, 3000, Australia, ken.roberts@forethought.com.au, Rohan Raghavan, Peter Danaher, John Roberts

Most mathematical models of sales response relate a firm's marketing instruments, like price and advertising, to sales. Further embellishments are the inclusion of consumer cognitive perceptions of quality, satisfaction and reputation. However, what is frequently overlooked in these models is the effect of consumer emotions. This study describes the use of a combined affective-cognitive model of choice to identify drivers of discount department store shopping. The model is used to design a communications and merchandising strategy intended to resonate with the target market with the aim of increasing market share and profit. This enhanced model provides managers with a method of designing and then assessing television commercial (TVC) content prior to campaign launch. In the case of Kmart Australia, the resulting correspondence between the TV spot message and the desired positioning, enabled it to grow earnings and capture increased market share, despite strong competitive response.

2 - Implementing Integrated Marketing Science Modeling at a Non-profit Organization: Balancing Multiple Business Objectives at Georgia Aquarium

V. Kumar, Chang Jiang Scholar, Regents Professor; Richard and Susan Lenny Distinguished Chair Professor in Marketing; Executive Director, Center for Excellence in Brand and Customer Management;, Georgia State University, 35 Broad St. NW, Suite 400, Atlanta, GA, 30303, United States of America, vk@gsu.edu, Amalesh Sharma, Naveen Donthu, Carey Roundtree

Georgia Aquarium (GA) is among the top aquariums in the US but its attendance and revenues have been declining lately; and although this is an industry-wide occurrence, GA wants to proactively reverse the trend. However, their management team faces conflicting objectives on how they could: A. Increase revenues without increasing ticket prices? B. Increase attendance without compromising on satisfaction? C. Make media investments more effective, without actually spending more? D. Attract customers who are likely to return, and who will be valuable when nurtured in the long run? In this talk, the audience will learn how such challenges were addressed through an integrated approach consisting of multiple marketing science models including Data Envelopment Analysis (DEA), Competitive Analysis, Zip code Analysis, Media optimization analysis and Pass holder Lifetime Net revenue (Customer Lifetime Value) analysis. The presenters will also elaborate on how GA succeeded in enhancing its bottom line and accelerating growth significantly by implementing their recommendations.

3 - ECO: Entega's Profitable New Customer Acquisition on Online Price Comparison Sites

Martin Natter, Goethe University, Frankfurt, Germany, natter@wiwi.uni-frankurt.de, Ana-Marija Ozimec, Ju-Young Kim

The market liberalization in the German household electricity market has led to the excessive number of 1,150 competitors. We describe a pricing approach that deals with this highly competitive market situation. The approach integrates different available data sources such as price comparison site data, regional transaction or cost data to optimize sales and profit targets. The developed tool, ECO (Electricity Contract Optimization) sets regionally varying one-time bonuses to attract new customers on price comparison sites. ECO considers the relationships among rankings, sales, margins, and regional demand- (market size and consumption levels) and supply-side (costs and competition) differences. ECO provides predictions for sales, profits and budget consequences for alternative market scenarios. We will present lessons that ENTEGA learned from a series of field experiments and scenario analysis with ECO, including
• profit impacts of previously used pricing heuristics versus the new optimization approach, • the impact of customer life-time predictions on one-time bonuses to reach target ranks on price comparison sites, • the advantage of considering regional differences in costs, competition and demand when setting prices, and
• costs that are associated with technical limitations and aggressive market behavior.

■ FB02

Room E208

Path to Purchase Models II

Cluster: Special Sessions

Invited Session

Chair: Daria Dzyabura, New York University, New York, NY, United States of America, ddzyabur@stern.nyu.edu

1 - A Search Cost Model of Consideration Set Formation

Michael Palazzolo, University of Michigan, Ann Arbor, MI, United States of America, palazzom@umich.edu, Fred Feinberg

Consumers making a choice from a large set of alternatives typically form consideration sets in an effort to limit search costs (the amount of time, mental energy, etc., needed to make a choice). Hauser and Wernerfelt (1990) and others have proposed that consumers make a cost-benefit trade-off, constructing a set of alternatives that maximizes the expected utility from their choice from that set, less the costs of consideration. However, researchers frequently abstract away from this trade-off when modeling markets with many alternatives, instead modeling consideration at the alternative (rather than set) level. This approach has a few major disadvantages, the most problematic of which is that the utility parameters must govern both alternative preference and consideration set size, potentially leading to bias in parameter estimates. We develop a consideration set model with two latent components: an alternative-specific consideration utility to govern alternative preference and a non-parametric search cost function to govern set size. We take this model to stated consideration set data for the automotive industry to illustrate the potential problem of estimation bias. We show that alternative-level consideration set models without search costs misattribute a consumer's decision to consider some but not all vehicles from a manufacturer to a lower preference for that manufacturer, rather than to a preference for a smaller consideration set. These models, in turn, underestimate within-firm substitution as a consequence of marketing decisions (e.g., they underestimate the market share the Corolla will steal from the Camry if advertising is increased for Corolla). Consequently, these models overestimate the profitability of those marketing decisions to the firm.

2 - Advertising, Consumer Awareness and Choice: Evidence from the U.S. Banking Industry

Maria Ana Vitorino, University of Minnesota, 3-150 CarlSMgmt 321 - 19th Avenue South, Minneapolis, MN, United States of America, vitorino@umn.edu, Elisabeth Honka, Ali Hortacsu

Does advertising serve to (i) increase awareness of a product, (ii) increase the likelihood that the product is considered carefully, or (iii) does it shift consumer utility conditional on having considered it? We utilize a detailed data set on consumers' shopping behavior and choices over retail bank accounts to investigate advertising's effect on product awareness, consideration, and choice. Our data set has information regarding the entire purchase funnel, i.e. we observe the set of retail banks that the consumers are aware of, which banks they considered, and which banks they chose to open accounts with. We formulate a structural model that accounts for each of the three stages of the shopping process: awareness, consideration, and choice. Advertising is allowed to affect each of these separate stages of decision-making. Our model also endogenizes the choice of consideration set by positing that consumers undertake costly search. Our results indicate that advertising in this market is primarily a shifter of awareness, as opposed to consideration or choice. Along with advertising, branch density, marital status, race and income are very significant drivers of awareness. We also find that consumers face non-trivial search/consideration costs that lead the average consumer to consider only 2.2 banks out of the 6.7 they are aware of. Conditional on consideration, branch density, the consumer's current primary bank (i.e. inertia), interest rates and education are the primary drivers of the final choice.

3 - Surviving Social Media Overload: Predicting Consumer Footprints on Product Search Engines

Beibei Li, Carnegie Mellon University, 4800 Forbes Avenue, Pittsburgh, PA, United States of America, beibeili@andrew.cmu.edu, Anindya Ghose, Panos Ipeirotis

An overload of social media content in product search engines can hinder consumers from efficiently seeking information and making decisions. We propose a structural model to predict consumers' online preferences on search engines to improve user experience. Our model combines an optimal stopping framework with an individual-level random utility choice model and analyzes click behavior in conjunction with purchase choices. It takes into accounts three major constrains in a consumer's decision making process: (1) interdependency in decision making for different alternatives; (2) sequential arrival of information revealed by click-throughs; (3) non-negligible search cost. Our approach allows us to jointly estimate consumers' heterogeneous preferences and search costs in the context of product search engines, and predict search and purchase behavior for each consumer. We validate the model using an individual session-level dataset of approximately seven million observations resulting in room bookings in 2,117 U.S. hotels. Our model prediction results demonstrate the proposed structural model provides the best overall performance in predicting consumers' online behavior compared to several baseline models that do not consider search costs or dynamics. Specifically, we see a 14.86 % and an 18.79% improvement in the out-of-sample prediction using our model compared to the next best performing model, with respect to click-through and conversion probabilities, respectively. Our policy experiments show that providing carefully selected, additional product information, especially the location-related information, on the travel search engine summary page will lead to a 24.71% increase in the overall search engine revenue.

4 - Assortment Optimization in the Presence of Consumer Preference Uncertainty

Daria Dzyabura, New York University, New York, NY, United States of America, ddzyabur@stern.nyu.edu, Srikanth Jagabathula

When consumers need to select a multi-attribute product online, they may have varying degrees of uncertainty about certain attribute levels. For example, a consumer shopping for a backpack may be certain about his utility for the color Black, but uncertain about his utility for “Safety Cone Orange”. In this case, consumers may either purchase the highest expected utility product online, or decide to visit a physical store in order to examine products and resolve the uncertainty on the attribute partworths. If the ideal product configuration is not available in the store, consumer may still purchase the product online after visiting the store, a phenomenon sometimes referred to as “showrooming”. The contribution of this paper is twofold. First, we propose a model of the purchase decision with attribute weight uncertainty, when the decision to visit the brick-and-mortar store is endogenous to the consumer’s prior beliefs about the attribute partworths, and derive results about the optimal in-store assortment. Second, we propose a direct elicitation method to train the parameters of our model. We measure consumers’ prior beliefs about attribute partworths when they examine the product online, then ask them to evaluate physical products to measure their true partworths.

■ FB03

Room E204

Consumer Health & De-Marketing

Contributed Session

Chair: Yanwen Wang, PhD Candidate, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States of America, yanwen.wang@emory.edu

1 - Measuring Competition among Hospitals via Online Patient Feedback

Dain Jung, Korea Advanced Institute of Science and Technology, N22, 291 Daehak-ro, Yuseong-gu, Daejeon, Korea, Republic of, dijung@kaist.ac.kr, Sulah Cho, Minki Kim, Junghyun Park

In the Health 2.0 era patients actively share their experience, information and opinion on hospitals through the internet, from which other patients’ hospital choices are increasingly affected. In this study we propose how small- and medium-size hospitals can utilize vast amount of available Web data to carry out user-centric medical marketing. By investigating a sample of pediatric clinics operating across diverse geographic regions, we construct a unique large-scale data on patient feedback in geo-specific online heath communities. In particular, we conduct sentiment analysis of online comments made by patients, and analyze how they assess and compare hospitals or clinics based on 6 quality factors: service, professionalism, process, environment, impression and popularity. Controlling for various hospital characteristics such as the distance between hospitals, prescription rate of antibiotics, hospital size, and etc., we showed how each of hospital services quality factors plays a different role in competition among hospitals. Utilizing our empirical finding, we also suggest ways to increase customer satisfaction for clinics operating under various types of competitive environments.

2 - Effects of Voluntary Disclosure of Product Information on Quantity and Quality of Firm Innovation

Joon Ho Lim, Doctoral Student, Texas A&M University - Marketing Department, 1001 Harvey Rd, 84, College Station, TX, 77840, United States of America, jlim@mays.tamu.edu, Ramkumar Janakiraman, Rishika Ramkumar

The objective of this study is to examine the consequences of food manufacturers’ decision to participate in a voluntary nutrition label program that is meant to simplify consumers’ understanding of nutritional content of food products. While most studies have focused on the effects of mandatory nutrition related policy changes on health outcomes of consumers, we focus on the firm side issues and ask the following question: Does food manufacturers’ voluntary decision to disclose product information impact their quantity and quality of innovation? On the quantity dimension, we focus on the number of new products classified into four launch types such as new product, new formulation, new variety and range extension, and new packaging. On the quality dimension, we focus on the firms’ decision to improve product nutrition. To investigate the causal effect of the voluntary label adoption, we employ a quasi-experimental study design using a combination of propensity score matching and a series of difference-in-differences and quantile difference-in-differences models. Our results indicate that participation in voluntary nutrition label initiative increases innovativeness on both quantity and quality dimensions. We find that participant firms introduce more innovative products as compared to non-participant ones. Moreover, participant firms overall increase the proportion of beneficial nutrients and decrease the amount of nutrients that consumers seek to limit. Lastly, we offer insights for policy makers and implications for consumers’ dietary outcomes.

3 - Countering Negative Publicity: Micro-evidence from Prescribing Patterns of Anti-cholesterol Drugs

Ho Jung Yoon, PhD Candidate, Purdue University, West Lafayette, IN, 47906, United States of America, yoon59@purdue.edu, Qiang Liu, Sangwoo Shin

The main goal of this study is to gain micro-level implications for countering negative publicity. To this end, we empirically investigate how physician prescription behavior changes after being exposed to a negative publicity shock. More specifically, our empirical analysis focuses on physician prescription patterns of anti-cholesterol drugs during the one-year time span, in the middle of which an announcement of the ENHANCE clinical trial outcomes triggered negative publicity about Vytoryn (one of the leading anti-cholesterol drugs). For modeling purposes, we postulate that the disutility induced by negative publicity is an one-time demand shock decomposable into two qualitatively different components: a nonrecoverable shock vs. a recoverable shock. The former is operationalized as a permanent shift of intrinsic drug preference, whereas the latter as a temporary shift of goodwill stock recoupable by detailing. Using physician-level panel data that contain both prescription and detailing histories, we estimate a Bayesian hierarchical logit model in which two component shocks of negative publicity, for each physician in the sample, are key parameters of interest. Our results indicate that the negative publicity caused substantial damage, on average, to physician preference for the focal brand, and that the composition of the overall damage is quite heterogeneous across physicians. A series of counterfactual experiments followed offer insights into how to tailor marketing actions to counter negative publicity.

4 - Anti-smoking Campaigns and Consumer Characteristics: Differential Responses among Menthol Smokers

Yanwen Wang, PhD Candidate, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States of America, yanwen.wang@emory.edu, Mike Lewis, Carla Berg

Counter-marketing, or efforts to reduce consumption of certain products, has become common in several domains such as tobacco, junk food, energy consumption, and furs. Counter-marketing has a particularly long history in the tobacco industry. Efforts to reduce smoking have included excise taxes that increase the costs of consumption, smoke-free restrictions that make consumption less convenient and anti-smoking advertising campaigns that highlight the dangers of tobacco use. This article presents a large empirical study of the relative effectiveness of these different strategies to reduce cigarette consumption. In addition, we investigate how these various policy tools induce product substitution. This issue is of considerable importance because some counter-marketing techniques may potentially shift consumers to more dangerous, higher nicotine products. Finally we investigate how the impacts of counter-marketing strategies vary across socioeconomic groups.

■ FB04

Room E201

Social Influence III

Contributed Session

Chair: Haibing Gao, University of Florida, Gainesville, FL, United States of America, gao1229@ufl.edu

1 - Do Product Domains Influence Dynamics of Friendship Networks and Purchase Behaviours?

Sang-Uk Jung, Assistant Professor, University of Auckland, 12 Grafton Road, Auckland, New Zealand, su.jung@auckland.ac.nz, Yuri Seo

Disentangling the distinct sources of observed correlated outcomes in a network such as homophily (selection) and influence is essential to understand the nature of interdependent behaviors or outcomes of customers. The primary goal of the present study is to separate out selection and influence processes of observed correlated purchase behaviors in a social network and investigate whether social influence pertains to product domains. To accomplish our goal, we apply the stochastic actor-driven model of behaviors and network of Snijder et al. (2005, 2007, 2010) to a unique individual-level dataset from a popular Massively Multiplayer Online Role Playing Game (MMORPG) company in Korea. The data contain information about in relational ties between gamers, items or products purchased by each individual and individual gamer demographics. Our analysis indicate that network ties and purchase behaviors mutually influence each other and consumers are less likely to be affected by their friends in the purchase of functional goods than the purchase of ornamental goods.

2 - The Differential Impact of Fraudsters on an Online Social Platform

Zhao Yang, University of Zurich, Zurich, 8051, Switzerland, zhao.yang@business.uzh.ch, René Algesheimer

Social games and social shopping experiences enrich people’s everyday lives. According to the research from Booz & Co., sales of physical goods through online social media will grow by 93% per year in the U.S., reaching $14 billion by 2015. Online platforms, which combine these two features, are becoming more and more popular. They define themselves as “social shopping game platforms”. On these platforms, users are guided to play various games to get discounts or even free goods. Although fraud is being regarded as harmful to the platform providers generally, there is almost no research on the differential impact of fraud behavior on firm performance. On the one hand, fraud behaviors are illegal which can distain the reputation of the platform and might drive other users to leave the platform. On the other hand, fraudsters are potentially among the most active users on a platform who potentially drive ad revenues and who can potentially positively influence their peer users. In this research, we employ data provided by a social shopping game platform to help answer the following three questions: a) What is the impact of fraudsters on the platform provider's revenue over the provider's lifecycle? b) What is the differential impact of fraudsters on other users' activity on the platform? c) How does fraudulent behavior diffuse across the platform? We base our analysis on a unique longitudinal dataset and we empirically answer the questions above. Our results will help similar platforms understand fraudsters, their impact over time and their behavioral diffusion. We discuss the managerial implications of our findings.

3 - The Optimal Design of Social-Local-Mobile Marketing

Chen Lin, Assistant Professor of Marketing, Michigan State University, Eli Broad College of Business, East Lansing, MI, United States of America, linc@broad.msu.edu, Yuxin Chen, Jeongwen Chiang

This research takes a first step to study the optimal design of SoLoMo (Social-Local-Mobile) marketing that integrates social, location-based, and mobile marketing tools into new customer acquisition and promotion platforms. Through a field experiment on Chinese Twitter, we track all online firm-to-consumer and consumer-to-firm interactions as well as final purchase information for a local company over a month time. We empirically examine the impact of the level of interactivity between firm and consumers on social networks on firm's sales. We propose that timing (i.e. the time interval between interactions) significantly correlates with the conversion rate for consumer responses. We also investigate three important factors in affecting firm-to-consumer communications in the Computer-Mediated Environments (CMEs): social characteristics of the consumers, location of the consumers, and whether consumers access the information through mobile or PC devices. Our research develops and tests the mechanisms for encouraging promotion-based social interactions, and vice versa, for leveraging social interactions to increase promotion effectiveness. We also provide a unique opportunity to improve the design of firm's social media marketing strategies.

4 - The Wisdom of Herding by Crowds: Do Individual Investors Trade on Product Consumption Experience?

Haibing Gao, University of Florida, Gainesville, FL, United States of America, gao1229@ufl.edu, Jinhong Xie

A vast literature explores whether systematic information asymmetry exists between individual and institutional investors. Our study identifies a condition where individual investors may obtain more information than institutions. Due to a closer relation with consumers in product market, individual investors may have better access to consumption experience, a potential source of value-relevant information in product market. As such we hypothesize that the potential information of consumption experiences can be more readily delivered to individual investors and influence their trading. In the empirical study, we use customer satisfaction surveyed by the American Customer Satisfaction Index (ACSI) to measure consumption experience in product market and use individual ownership to represent the aggregated net trading by individual investors. We explore the potential informational role of customer satisfaction in guiding individuals' trades. The results indicate that individual investors' net buying following the common signal of customer satisfaction generates contemporaneous positive stock returns and also positively predicts stock returns of the next year. Thus, individual investors trade actively to exploit this information advantage in product market.

■ FB05

Room E231

Online Advertising II

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Christian Doppler, Universitat Frankfurt, Klara-Siebert-Strafle 11, Karlsruhe, 76137, Germany, ch.doppler@googlemail.com

1 - Does Competition Lead to More Price Advertising? Examining the Impact of Competition on Search Ads

Yupin Yang, Assistant Professor, Simon Fraser University, Beedie School of Business, 8888 University Drive, Burnaby, V5A 3S6, Canada, yya29@sfu.ca, Guanting Tang, Jian Pei, Qiang Lu

Although search advertising has gained popularity in recent years, research on the content of search advertising is scarce. This study develops a conceptual framework to understand how market competition affects what a firm advertises in its search ads. The study uses 3,835 search advertisements from the hotel industry to test hypotheses developed from the conceptual framework. The findings indicate that channel intermediaries engage in more price advertising in their search ads in a highly competitive market, but brand suppliers do not change their level of price advertising based on market competition. More interestingly, competition from intermediaries and brand suppliers has different effects on the content of search advertising by intermediaries and brand suppliers. These findings enhance the understanding of firms' behaviors in designing their search advertising content in response to different market conditions.

2 - Analyzing Brand Competition Structure and Marketing Efficiency By using Search and Sales Data

Janghyuk Lee, Associate Professor, Korea University, Business School, An-am, Seong-buk, Seoul, Korea, Republic of, janglee@korea.ac.kr

We presentgeneralizable but simple methods to assess the competition structure of brands at consideration setand the efficiency of brand's marketing to transform consumers' interest to sales by using search data from Google Trends and automobile sales data across states in U.S. market. Search index provided by Google Trendsshows not only the level and the evolution of interest of chosen keywords but also the structure of intereston them. If a consumer considers two brands together, their search index tends to move upward together (positive cross impact). Otherwise one's search index increaseweakens that of the other. Search data provide very helpful information for marketers to understand the competition structure among competing brands at the given time as well as its evolution over time. As search index is linked with sales data, it shows 1) the magnitude of search impact on sales, 2) the marketing efficiency of transforming consumers'interest into sales (search to sales conversion rate) across brands.Our findings from U.S. data in 2012 showtwo groups, Chevy & Ford and Honda & Toyota in terms of competition at consideration and sales conversion.

3 - Search Engine Advertising: A Model of Competition Across Search Engines

Mohammad Zia, University of Texas at Dallas, Richardson, TX, 75080, United States of America, mxz115020@utdallas.edu, Ram Rao

Search engine advertising represents the most important form of digital advertising, reaching the revenue of nearly 40 billion in 2013. This market has been dominated by Google and Yahoo!Bing network, holding about 80 and 20 percent of the market share, respectively. Both of these platforms use generalized second price auctions (GSP) to assign paid placements to advertisers and collect payments. This is the first paper that investigate properties of the GSP in a duopoly setting (with two search engines). In our model, customers can be either loyal to one search engine, or use both search engines occasionally (cross-searching), for example through their different devices. Advertisers are heterogeneous in their valuations and ad qualities. Search engines are heterogeneous in their position effects and auction design through quality score mechanism. We find that cross-searching behavior plays an important role in shaping the equilibrium outcomes of GSP. In particular, advertisers are assigned to the high-slot in one search engine and the low-slot in the other, if valuations are close enough. This contrasts the traditional result on GSP auctions indicating that at equilibrium advertiser are ranked based on their valuations (Varian 2007). We also explore the effect ad quality and quality score mechanism on GSP equilibrium outcomes. Our results shed light on different order of sponsored links in different platforms and provide normative insights for competing search engines as well as advertisers.

4 - Search Engine Value-at-risk – How Exposed are Online Marketers to Search Engines?

Christian Doppler, Universität Frankfurt, Klara-Siebert-Strasse 11, Karlsruhe, 76137, Germany, ch.doppler@googlemail.com, Bernd Skiera

For many firms, e.g., media and ecommerce businesses, visibility in organic search is important to attract new customers and to retain existing ones. However, the search engine visibility of a web page varies over time driven by changes in the competitive environment, consumer behavior and algorithmic updates of the search engine. A decrease in search engine visibility can pose a significant risk to firms as Expedia recently had to experience when its stock fell after information about a significant drop in search rankings got public (http://blogs.wsj.com/corporate-intelligence/2014/01/21/is-expedia-feeling-googles-wrath/). Given that this risk is relatively new, management and investors often find it hard to judge about the extent of the actual threat. The aim of this presentation is to increase transparency about the risk to lose search engine visibility. We develop models to compute the Search-Engine-Visibility-at-Risk and the Search-Engine-Value-at-Risk of a web page. These metrics predict the potential loss of search engine visibility and can be reported by firms internally or even published externally (e.g., in annual reports). In an empirical study, we validate our models and provide further insights into the risk to lose search engine visibility. In particular we show that the degree of search engine risk differs strongly across firms and industries.

■ FB06

Room E234

Diffusion in Social Networks

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Christian Barrot, Kühne Logistics University, Grofler Grasbrook 17, Hamburg, 20457, Germany, christian.barrot@the-klu.org

1 - An Experimental Study of Information Diffusion in Competitive Settings

Yotam Shmargad, Kellogg School of Management, Marketing Department, 4th Floor, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, y-shmargad@kellogg.northwestern.edu

Existing work demonstrates that networks with higher levels of clustering, in which one's friends are friends with each other, expedite information diffusion. However, previous work neglects an important aspect of many information environments: competing firms try to get their messages out at the same time. In these competitive settings, it is important to assess how quickly individuals are exposed to messages from competing firms. While high-clustered networks may expedite the diffusion of a single message, they can hinder exposure to two competing messages. This lack of diversity can harm smaller firms by allowing their larger competitors to monopolize the information flowing through the network. This paper introduces competition in an experimental study of information diffusion in networks with various levels of clustering. The study manipulates clustering by controlling to whom participants are connected in an artificial online social network. The study also manipulates the balance of marketing resources (number of message seeding points) between two competing firms. I find that low-clustered networks decrease the inequity in message exposure brought upon by the imbalance in marketing resources.

2 - The Joint Diffusion of a Digital Platform and its Complementary Goods

Meisam Hejazi Nia, PhD Student, University of Texas at Dallas, Richardson, TX, 75080, United States of America, mxh109420@utdallas.edu, Norris Bruce

In many industries such as mobile applications and video games, platform owners (PO) open platforms to third party developers, who in turn create complementary products (CP) that spur adoption of platforms. Conversely, a large installed base of platform users can attract third-party developers, leading to further creation and adoption of complementary items. Thus, we extend the Bass Diffusion Model (BDM) to study the joint or interdependent diffusion of a digital platform and its complementary products. Given the experience attributes embedded in digital goods, we investigate the effects of quality signals such the distribution of product ratings, observational learning, usage levels, and referrals on their adoption. We apply the resulting model to a unique data set of daily downloads over 5 years for the Firefox browser (platform) and 52 of its add-ons (complements). For estimation, we re-cast the resulting 53 BDM differential equations into non-linear, discrete-time, state space forms; and then estimate them using an MCMC approach to the Extended Kalman Filter. Unlike continuous-time filters the procedure used here avoids numerical integration at every time period, and so is more computational efficient, given our lengthy time- series. Results show that variance of product ratings reduces and observational learning increases the demand for add-ons. We find, too, an interesting asymmetry: that a platform's new generation positively impacts the diffusion of add-ons, but an add-ons' new version does not affect the diffusion of the platform. These and others findings have implications for PO's governance of the PO-CP network.

3 - A Generalized Model of New Product Diffusion Incorporating Social Network Data

Tae-Hyung Pyo, Doctoral Student, University of Iowa, S357 PBB Building, Iowa City, IA, 52242, United States of America, tae-hyung-pyo@uiowa.edu

The Bass model has been used extensively and globally to forecast first purchases of new products. It has been named by INFORMS as one of the TOP 10 Most Influential Papers published in the 50-year history of Management Science. Most models for the diffusion of innovation are deeply rooted in the work of Bass (1969). His work provides a framework to model the underlying process of innovation adaption among first-time customers. Potential customers may be connected to one another in some sort of network. Prior research has shown that the structure of a network affects adaption patterns (Dover et al. 2012; Hill et al. 2006; Katona and Sarvary 2008; Katona et al. 2011; Newman et al. 2006; Shaikh et al. 2010; Van den Bulte and Joshi 2007). One approach to addressing this issue is to incorporate network information into the original Bass model. The focus of this study is to explore how network structure affects the estimation of the Bass model parameters and how to incorporate network information into the Bass model. First, I prove that the Bass Model assumes all potential customers are linked to all other customers. Through simulation on individual adoptions and connections among individuals using a Random Network1, I show that the estimate of q in the Bass Model is biased downward in the original Bass model. Also the estimate of the innovation parameter (p) is also biased upward due to the negative correlation between the p and q estimates. I find that biases in the Bass Model depend on the structure of the network.

4 - Organizational Adoption and Diffusion of an Online Channel: Effects of Competition and Legitimation

Christian Barrot, Kühne Logistics University, Grofler Grasbrook 17, Hamburg, 20457, Germany, christian.barrot@the-klu.org, Arvind Rangaswamy, Nazrul Shaikh, Sönke Albers

Why do firms adopt new technologies, and how do these technologies diffuse across firms? These are perennial questions in new product management. In recent years, the Internet has created an additional context to take into account in explaining adoption and diffusion processes. We draw upon the literature in institutional theory and population ecology of firms to propose that competitive and legitimation pressures play central roles in technology diffusion across firms, particularly for technologies that can influence the business models of the adopting firms. We test the validity and value of our model using a unique data set tracking the diffusion of a new online sales channel within car dealers in Germany. For this population, we know the exact time sequence of adoptions by the dealers, and we also have data for several key covariates and the exact locations of all car dealers in Germany (i.e., for both adopters and potential adopters of the online channel). For estimating the diffusion trajectory, we propose a binary choice model that accommodates both the adoption and the adoption-time decisions of each car dealer. We operationalize the model using network-theoretic measures of the time-varying constructs of competitive and legitimation pressures based on the proximity network between the dealers, and the past adoptions in different geographical areas. Several insights emerge from our study, including the following: (1) Competitive pressure acts as the "trigger" in inducing adoptions but legitimation pressure creates the pre-disposition for adoption. (2) Contrary to the claims of the "death of distance" that we see in the trade press, the adoption of digital products by firms may be influenced strongly by geographically-based local competition.

■ FB08

Room E304

Advertising Effectiveness IV

Contributed Session

Chair: Gilles Laurent, Professor, INSEEC Business School, 27 Avenue Claude Vellefaux, Paris, 75010, France, glaurent@inseec.com

1 - Assessing Media Communication Efficiencies

Woo Li Ko, PhD Student, Korea University Business School, Anam-dong, Seongbuk-gu, Seoul, 136-701, Korea, Republic of, wooli.ko@gmail.com, Sang Yong Kim

Marketers use media as a medium to communicate with consumers. Multiple media channels are coexisting and running various marketing communication activities require significant resources and efforts. Thus, the efficiencies of their marketing efforts should be measured. In this study, we use DEA analysis to measure companies' relative efficiencies in media communication strategies from competitors. To properly understand the total impact of media communication activities on business performance, we paid our attention to three types of media, such as paid media, owned media, and earned media, and considered them as jointly. For the output variables, we used both short-term and long-term performance measures like sales and enterprise values as outcome variables. In such, we measured companies' relative media efficiencies with three types of media inputs and two output variables. Our results showed that there are inefficiencies in media communication activities regardless of industries, and the market leaders tend to be an efficient investor in running multiple media among them. In further, inefficiencies in each media could be improved by controlling its resources more efficiently. Especially, we found that the popularity of social media among consumers make companies to overemphasize the role of owned media activities. Thus, our analysis suggests the justification of human resources in owned media allocation, and develops a new media communication strategy accordingly.

2 - A Video Based Ad Display System

Li Xiao, Assistant Professor, Fudan University, Room 513, Siyuan Building, 670 Guoshun Road, Shanghai, 200433, China, lixiao@fudan.edu.cn, Min Ding

It has gradually become common practice in marketing to use LED screens to display ads on many occasions, e.g. the digital POS systems in retail stores, digital billboards at bus stops, and video screens installed on the seatbacks in taxis and airplanes, etc. In such system, it will show a group of ads, one after another in a predetermined sequence, and then loop back to start from the first ad. This system has the advantage of playing multiple ads in only one space. However, it treats every viewer in the same fashion, and ignores the substantial heterogeneity among viewers' preferences toward various ads. If viewer's individual preference toward ads is known, the system could display ads that appeal to the viewer's specific preference so as to enhance the communication effectiveness. To achieve this purpose, we propose a video based ad display system, which utilizes the state-of-art facial expression recognition and eye gaze detection techniques to reveal the viewer's individual preference toward different ads. Facial expression is a good natural indication of viewer's internal preference. Eye gaze indicates the viewer's attention area on the screen, which could further be mapped to the element in the ad that attracts the viewer's attention. The proposed system videotapes the viewer's responses when s/he views a specific ad; and by recognizing his/her facial expression and detecting eye gaze simultaneously on each frame in the recorded video, the system could estimate the viewer's specific preference toward various elements contained in the ad, so as to estimate his/her preference toward the overall ad. We tested the system in an empirical study, and found that our proposed system is able to make reasonably accurate inferences of viewers' preferences toward video ads.

3 - Bayesian Elaboration Likelihood Model for Segments by Information Processing Routes & Initial Stages

Fumiyo Kondo, Assistant Professor, University of Tsukuba, 1-1-1 Tennoudai, Tsukuba-shi, Japan, kondo@sk.tsukuba.ac.jp, Satoshi Nakano

This paper analyzes zapping across radio stations (frequent switching from one station to another) as a function of consumer age and other demographic characteristics. Zapping is an important managerial challenge, as it may create a damaging gap between the total audience of a station (total number of individuals listening to a station over, say, a week or a day) and its audience at a specific time. To build our hypotheses on zapping, a phenomenon to be assessed over a very short horizon (within a few hours or even within an hour), we rely on previous research in psychology as well as on previous marketing research on consumer repeat purchase behavior (or lack of) over much longer periods such as several years or even a lifetime (on cars, perfumes, and indeed radio stations). We test those hypotheses by estimating stochastic models with age-related parameters on a large representative data set (MÈdiamÈtrie) of French radio listeners, describing which station they listen to, 15 minutes by 15 minutes, over 23 consecutive days. Controlling for the total daily duration of radio listening (itself related to age), we analyze both quantitative and qualitative aspects of zapping. How does the tendency to zap depend on listener characteristics (age, gender, education, etc.), radio station profile (long-established or recent, specialized or so-called "generalist," etc.), and listener likely parallel activities (weekdays vs. week-ends, time of the day, retired or active person)? What is the qualitative structure of zapping in terms of which station is zapped out and which is zapped in? How is that structure related to listener characteristics? A complementary qualitative study offers indications on listeners' motivations to zap as a function of age.

4 - Consumer Age and Radio Zapping

Gilles Laurent, Professor, INSEEC Business School, 27 Avenue Claude Vellefaux, Paris, 75010, France, glaurent@inseec.com, Raphaëlle Lambert-Pandraud

This paper analyzes zapping across radio stations (frequent switching from one station to another) as a function of consumer age and other demographic characteristics. Zapping is an important managerial challenge, as it may create a damaging gap between the total audience of a station (total number of individuals listening to a station over, say, a week or a day) and its audience at a specific time. To build our hypotheses on zapping, a phenomenon to be assessed over a very short horizon (within a few hours or even within an hour), we rely on previous research in psychology as well as on previous marketing research on consumer repeat purchase behavior (or lack of) over much longer periods such as several years or even a lifetime (on cars, perfumes, and indeed radio stations). We test those hypotheses by estimating stochastic models with age-related parameters on a large representative data set (Médiamétrie) of French radio listeners, describing which station they listen to, 15 minutes by 15 minutes, over 23 consecutive days. Controlling for the total daily duration of radio listening (itself related to age), we analyze both quantitative and qualitative aspects of zapping. How does the tendency to zap depend on listener characteristics (age, gender, education, etc.), radio station profile (long-established or recent, specialized or so-called "generalist," etc.), and listener likely parallel activities (weekdays vs. week-ends, time of the day, retired or active person)? What is the qualitative structure of zapping in terms of which station is zapped out and which is zapped in? How is that structure related to listener characteristics? A complementary qualitative study offers indications on listeners' motivations to zap as a function of age.

■ FB09

Room E301

Marketing Strategies in Chain Industries

Cluster: Special Sessions

Invited Session

Chair: Nathan Yang, Yale University, Yale School of Management, 165 Whitney Avenue, New Haven, CT, United States of America, nathan.yang@yale.edu

Co-Chair: Mitsukuni Nishida, Johns Hopkins University, Baltimore, MD, United States of America, nishida@jhu.edu

1 - Competition, Service Quality and Internal/External Incentives: Evidence from the Car Rental Industry

Jian Ni, Johns Hopkins University, Baltimore, MD, United States of America, Qiaowei Shen, Ting Zhu

In many industries, both price and service qualities are important in consumers' choices. Whether price and service are complements or substitutes under different market structure is an interesting question. On the one hand, excellent consumer service can complement competitive pricing in some settings. On the other hand, firms that charge a high price in a competitive market may hope to compensate the price disadvantage by providing high service quality, in which case price and service can be seen as substitutes. We investigate this question in the context of the car rental industry. Using the data which include detailed car rental transactions, market structure, and customer and employee satisfaction of a major car rental company, we build an integrated framework to study how the price and service quality could impact customers' rental behavior, and how they might differ across different market environment even within the same chain. More importantly, we separately identify the employees' internal incentive, i.e., the intrinsic motivation to serve customer better, from the external (monetary) incentive such as the bonus of successful upselling, and then investigate how these two incentives could distort the service quality and mitigate the effort of pricing.

2 - Franchisees' Market Expansion Effort in B2B Settings

Tongil Kim, Emory University, Atlanta, GA, ti.kim@emory.edu

Franchisees or sales agents in business-to-business (B2B) settings often visit customers as part of market expansion effort in order to increase customer goodwill. When they make such visits, they face a decision on whether to visit new customers or old customer among other things. Visiting new customers can bring in new business while visiting old customers helps to retain old customers. Using detailed sales visit data in the car radiator market, this paper quantifies customer acquisition cost and customer retention cost by modeling goodwill stock in customer utility and franchisees' dynamic sales visit decision in the industry. Further, this paper discusses potential ways that the franchisor can use this cost information in order to better control its franchisees' market expansion effort.

3 - Segmentation and Spatial Competition in the Grocery Industry

Paul Ellickson, University of Rochester, Rochester, NY, United States of America, Paul Grieco, Oleskii Kvastunov

The U.S. grocery industry is dominated by chains, both national and local, competing in both product and geographic space. Due in part to competition from Wal-Mart, these chains face increasing pressure to differentiate, tailoring their outlets to narrower (and more spatially diffuse) consumer segments. This segmentation comes at the expense of economies of scale and scope, which have traditionally driven market structure in this industry, and potentially leaves some consumers under-served. Using a census of store level data on revenue, location, size and chain affiliation we examine the mechanisms by which rival firms differentiate, the demand-side implications of this segmentation, and the cost-side trade-offs they engender. We develop a model of individual store choice, aggregated to explain store-level revenue information, which allows for rich substitution patterns driven by local demographic variation. With this outcome data in hand, we then recover estimates of the cost-side drivers of location and product-line decisions, highlighting a key tension between network economies and focused segmentation. In particular, we examine the degree to which an 'extreme value' positioning has allowed certain firms to benefit from Wal-Mart's entry, while a more diffuse positioning leaves firms more vulnerable.

4 - Performance Dynamics in Retail Expansion

Mitsukuni Nishida, Johns Hopkins University, Baltimore, MD, United States of America, nishida@jhu.edu, Nathan Yang

We study firm performance dynamics in retail growth. A retailer may become increasingly profitable when expanding in size, say through accumulated goodwill or scale/scope economies. We develop a dynamic model of expansion that allows for these profitability dynamics to operate through a serially correlated and unobserved profitability process, and estimate it using data on convenience-store chains (7-Eleven, LAWSON, Family Mart, circleK, sunkus, and ministop) in all 47 Japanese prefectures (1982—2012). Given the presence of firm-specific and serially correlated unobservables, we make use of an approach akin to Blevins (2011) and Blevins, Khwaja, and Yang (2013) that combines particle filtering methods with two-step estimation of dynamic discrete choice games. Because both revenue and store counts are observed in our data, the estimated model helps us determine the extent to which productivity dynamics operate through demand (i.e., accumulated goodwill), or fixed costs (i.e., scale economies). To motivate our structural estimation, reduced form analysis reveals that the relationship between past size and expansion/revenue differs across chains. In particular, we find that past size and revenue are positively correlated for LAWSON. These findings are suggestive of the presence of both accumulated goodwill and scale/scope economies in the industry. For our policy analysis, we make use of the fact that our sample time period covers the event where two of the chains merged together by investigating how profitability dynamics are affected by merger.

■ FB10

Room E331

Category Management II

Contributed Session

Chair: Sri Devi Duvvuri, Assistant Professor, SUNY at Buffalo, 215 F Jacobs, Buffalo, NY, 14260, United States of America, sduvvuri@buffalo.edu

1 - Investigating the Negative Attraction Effect: An Information-Processing Approach

Lutz Hildebrandt, Professor, HU-Berlin, Spandauer Str. 1, Berlin, 10178, Germany, hildebr@wiwi.hu-berlin.de, Nicole Wiebach

The scenario of market exit and its impact on preferences has so far not generated much research interest despite its significant relevance for delisting strategies and portfolio decisions. In two online experiments, the authors verify the existence of context-dependent preferences changes for brand removals. In particular, they validate a negative attraction effect which describes the disproportionate lower increase in a target's choice probability after the removal of an inferior brand. By building on the conceptual model of Mishra/Umesh/Stem (1993), they further provide an empirical consideration of several fundamental antecedents of the negative attraction effect. Specifically, the results of a structural model emphasize decoy share, preference strength and information relevance as major drivers of the resultant preference shifts.

2 - An Investigation of Market Basket Evolution: A Network Perspective

Dalal Ahmad, PhD Candidate, Texas Tech University, Rawls College of Business, Lubbock, TX, 79409, United States of America, dalal.ahmad@ttu.edu, Mayukh Dass, Piyush Kumar, Dale F. Duhan

Market baskets, a collection of items bought at a single shopping trip, has drawn increasing research attention especially with the availability of scanner data, and the growing importance in understanding multi-category consumer choice. Extant literature on market basket analysis has mainly focused on modeling consumer choices in terms of co-occurrences, complementarity, and heterogeneity effects at different basket settings. However, we have limited understanding on how market basket configuration evolves with its size, and over time. In this research, we consider market basket contents in a form of implicit networks, and use network analysis to (1) investigate the evolution of market baskets (in terms of relationships among categories) across size and time, and (2) we explore how various purchase characteristics such as brands, share of wallet, and price promotions affect these relationships during the process. We examine these research questions using five years scanner data collected from a national grocery chain. We conclude the paper with managerial implications, and insights for category management.

3 - The Informative Role of Retail Assortments: Theory and Empirical Evidence

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The objective of our research is to understand the informative role that retail assortments play in shoppers' product choices based on actual and perceived differences in assortment size. We propose that shoppers learn more experientially (i.e., via sampling) and non-experientially from larger assortments, even if shoppers perceive those assortments to be too large. We also propose that retail assortments are differentially informative for product choices made for immediate consumption compared to simultaneous product choices made for sequential future consumption. To accomplish our objective, we ran a large study over several weeks during which respondents chose single-serve candy products for both immediate and future consumption. We found that: • Respondents changed expectations about their future preferences in proportion to the number of products in the assortment they saw. • Simultaneous choices made after seeing a large assortment were better aligned with sequential future preferences than were simultaneous choices made after seeing a small assortment; we conclude that shoppers either learned more about their preferences from the larger assortment or that seeing the larger assortment changed their preferences to align with the products they chose. • Assortments perceived to have too many products were generally (i) more informative and (ii) more helpful in making simultaneous choice decisions and (iii) more attractive than assortments perceived to have about the right number of products. • Of particular importance, assortments perceived to have too few products were significantly worse for shoppers than assortments perceived to have too many products on almost every relevant dimension. This asymmetry should be an important consideration for retailers when making decisions about assortment size. • Respondents reported that they had learned more by sampling products from larger assortments and that that learning helped them make simultaneous choice decisions. On the other hand, we found little evidence that experiential learning affected product choices. • Consistent with our conception of assortments as informative, we found that experts generally learned less from assortments than novices did, but also incurred lower cognitive costs when choose from the same size assortment.

4 - Multivariate Analysis of Consumer Preference Structures Across Multiple Categories

Sri Devi Duvvuri, Assistant Professor, SUNY at Buffalo, 215 F Jacobs, Buffalo, NY, 14260, United States of America, sduvvuri@buffalo.edu

That consumers' purchase behavior varies across categories is being documented actively by the marketing science community. The variation in such behavior can be attributed to the heterogeneity in consumer preferences across categories as well as the nature of categories (e.g., substitutes). In this research, we implement a model specification that helps deduce how the nature of a category influences a consumer's preference structure for that category and other related categories. Over and above critically evaluating the results from this model, we also derive marketing metrics that would help with deducing the (i) effectiveness of a retailer's pricing and promotional policies, and (ii) suggest directions for improving customer relationship management. We use scanner panel data from several categories to estimate the model. Given the complex nature of the modeling approach, we use Hierarchical Bayesian methods (MCMC) to obtain model parameters.

■ FB11

Room E334

Sales Force: Incentives & Performance

Contributed Session

Chair: Srinath Gopalakrishna, Professor of Marketing, University of Missouri, 434 Cornell Hall, Columbia, MO, 65211, United States of America, srinath@missouri.edu

1 - An Analysis of Non-linear Compensation Plans for Salespeople

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The use of non-linear incentives for sales representatives is becoming increasingly common in many industries such as high-technology and professional services (Larkin 2013). Such non-linear plans take the form: Commission rate B1 for sales up to quota, Q, commission rate B2 for sales in excess of quota, Q, with B1 < B2. Moreover, these incentives are also fairly high-powered in that the commission rates for exceeding quota may be of the order of 30-50%. The basic premise is that such convex incentives schemes elicit greater effort. At the same time, employees can alter the timing of outputs to take advantage of the non-linearity in the compensation schedule. These opposing considerations make the investigation of such high powered non-linear incentives academically and managerially interesting. When will it be profitable for firms to use non-linear incentives? What factors will this decision depend on? In short, our research questions are why such plans are employed and how they should be deployed. In contrast to the standard agency-theoretic explanation of decreasing risk-aversion for convex compensation schemes, we demonstrate that non-linear plans provide the firm with additional degrees of freedom to induce effort more efficiently when the firm faces heterogeneity in sales force ability. In addition, the benefit of inducing effort more efficiently may even dominate the degradation on account of timing games. Overall, these results provide new insights into the optimality and deployment of non-linear plans and thereby extends a large body of work on sales force compensation plans.

2 - When Do Group Incentives for Salespeople Work?

Hua Chen, Assistant Professor of Marketing, University of Mississippi, 239 Holman Hall, University, MS, 38677, United States of America, hchen@bus.olemiss.edu, Noah Lim

When should sales managers employ group incentives over individual incentives to motivate their sales force? Using economic experiments, we show that two-person group incentives can outperform individual incentives and that its relative efficacy depends on three important factors. First, the strength of social ties among the group members matters. Effort decisions in group-based incentives increase significantly when we allow subjects to socialize briefly before committing effort. Second, the design of the group incentive matters. For the group incentive to work better than the individual incentive, the group-based component (i.e., how much the payment scheme weights the contribution of others) in the former cannot be too large. Third, the informational feedback that group members receive matters. When group members who were socialized could observe each other's true effort, rather than just the output alone, effort surprisingly decreases. We show that a model that accounts for social preferences and psychological loss from having one's effort underestimated by teammates can explain salesperson behavior in group incentives well.

3 - Group versus Individual Incentives and Selling Performance

Wenshu Zhang, Krannert School of Management, Purdue University, 403 W. State Street, West Lafayette, IN, 47907, United States of America, zhang991@purdue.edu, Subramanian Balachander

With growing complexity of sales processes and higher consumer expectations on service, the ability of salespersons to work as a team has become important for success. Correspondingly, and increasing number of firms have adopted group-based compensation schemes to motivate employees. In spite of importance of this topic, there are few studies on the effectiveness of group versus individual incentive schemes in their ability to motivate salesforce performance and improve sales and profit for the firms. In this research, we develop a game-theoretic model to understand how brand strength and other factors may influence a firm's optimal choice of compensation scheme, including individual-based versus group-based incentive schemes. Starting from the consumer's purchase decision, we analyze how individual-based and team-based compensation schemes affect employees' effort and affect firm profits. We incorporate moral hazard, free-riding behavior, and brand competition in the model to reflect the environment confronted by firms while considering other essential factors involved in their decision making process. With comparative statics, we aim to understand how a firm's compensation scheme varies with brand equity level.

4 - The Impact of Salesperson Social Network Structure on Sales Prospecting Effectiveness

Srinath Gopalakrishna, Professor of Marketing, University of Missouri, 434 Cornell Hall, Columbia, MO, 65211, United States of America, srinath@missouri.edu, Andrew Crecelius, Raghuram Iyengar

The term 'sales funnel' characterizes the progression of a typical sale in a well-defined sequence of steps. The first and arguably most important step in the process is prospecting – searching for new business. However, a widely held view among managers is that salespeople manage this activity rather poorly (Johnston and Marshall 2011). The academic literature provides scant guidance regarding prospecting effectiveness. One mechanism for identifying prospects may be to leverage salespeople's networks of social and professional contacts. Extant empirical work (‹stuner and Iacobucci 2012; Gonzalez, Claro, and Palmatier 2014) has identified positive effects of a salesperson's intra-firm network on sales performance, but notably has ignored (a) the prospecting phase and (b) the network of contacts outside the firm. This paper addresses these issues and fills an important gap in the understanding of the drivers of a crucial step in the sales process. Specifically, we combine survey research with archival data in an empirical study of the social network structure and prospecting performance of several hundred sales agents belonging to a U.S. insurance company. We draw on theories in sociology proposed by Granovetter (1973), Burt (1992), and others to predict the links between network variables and prospecting outcomes. We report results based on a joint analysis of a pair of dependent variables – the generation of new business leads in terms of quantity and quality. We also sketch some implications for sales programs aiming to optimize the sales funnel and how salespeople might gain insights into better sales prospecting.

■ FB12

Room W300

Customer Lifetime Value

Contributed Session

Chair: Sarang Sunder, Doctoral Student, Georgia State University, 35 Broad St, Suite 400, Atlanta, GA, 30303, United States of America, ssunder1@gsu.edu

1 - How to Predict Customer Value? A Comparison of New Approaches for Non-contractual Business Settings

Markus Meierer, University of Zurich, URPP Social Networks, Andreasstrasse 15, Zurich, Switzerland, markus.meierer@business.uzh.ch, René Algesheimer, Patrick Bachmann

With firms' increasing interest in marketing analytics, customer valuation receives more attention than ever. This is clearly reflected in recent advances in customer lifetime value calculation for non-contractual business settings such as grocery retailing. However, due to the novelty of these developments there is little empirical evidence on when which model performs best. To calculate customer lifetime value in non-contractual settings it is essential to statistically model both, how long a customer will stay with the firm as well as the frequency of a customer's future transactions. The Pareto/NBD model (Schmittlein, Morrison, and Colombo, 1987) was the first model to address both issues and is currently the de facto standard in marketing practice and research. Recently, alternative models have been proposed, such as the BG/NBD model (Fader, Hardie and Lee, 2005), the GGompertz/NBD (Bemmaor and Glady, 2012), and the Normal/NBD model (Jain and Singh, 2013). Besides, some initial work has been done on the inclusion of covariates into these models. However, no empirical comparison of those approaches across multiple real-world scenarios exists. We contribute to the literature on customer lifetime value by providing a structured review of recent modeling approaches for non-contractual business settings. Additionally, we compare the models' performance by using four different datasets from the grocery retail, luxury goods, travel, and video-on-demand industry. Our findings have strong implications for both, marketing practice and research. Besides giving detailed recommendations on when to use which modeling approach, we also provide practical advices for estimating these models.

2 - Counting Your Seasonal Customers

David Harman, University of Iowa, Henry B. Tippie College of Business, Iowa City, IA, 52242, United States of America, david-harman@uiowa.edu

Stochastic customer lifetime value (CLV) models, such as the Pareto/NBD, make the assumption that customer transactions follow a stationary Poisson process. But there are many categories of non-contractual consumer goods where the stationary purchase rate assumption is violated, particularly categories with seasonal purchase patterns. The author uses donation data from a non-profit that exhibits a seasonal donation pattern to demonstrate how the stationarity assumption in existing CLV models can bias estimates of the probability that a customer is still active as well as CLV. A model is then proposed where customer transactions follow a nonhomogeneous Poisson process in which the purchase rate is a function of time to correct for this bias.

3 - Customer Acquisition Incentives and Customer Value

Heike Wolters, University of Hamburg, Max-Brauer-Allee 60, Hamburg, 22765, Germany, Heike.Wolters@uni-hamburg.de, Karen Gedenk

Companies often offer monetary incentives to attract new customers. These incentives can either be given to a new customer as an acquisition bonus or to a current customer in form of a referral reward for successfully recommending the company to a new customer. But how do monetary incentives offered to new and existing customers influence the value of an acquired customer? To answer this question, we study three different monetary incentives: (1) a new customer acquisition bonus, which is given to every new customer no strings attached (unconditional bonus) (2) a new customer acquisition bonus, which is paid only if the new customer fulfills a condition (conditional bonus) and (3) a referral reward given to a current customer. We use data on 16,630 new customers of a large telecommunication service provider to compute two measures of customer value. First, we determine "past customer value" based on cash flows within the first 1.5 years a new customer is with the company. In addition we estimate a Pareto/NBD model to predict cash flows beyond the time window of our data und compute a "future customer value". We regress these two measures of customer value on the size of the three monetary incentives. Preliminary findings suggest that higher incentives hurt customer value for all three types of incentives. However, the negative effect on customer value is smallest for the conditional bonus.

4 - Modeling the Lifetime Value of a Customer (CLV) in the Consumer Packaged Goods (CPG) industry

Sarang Sunder, Doctoral Student, Georgia State University, 35 Broad St, Suite 400, Atlanta, GA, 30303, United States of America, ssunder1@gsu.edu, V Kumar, Yi Zhao

With the explosion of more disaggregate databases, Customer Lifetime Value (CLV) has emerged as a very useful customer valuation metric due to its forward-looking profit-oriented focus. While CLV has been implemented in several industries and business setting (B2B/B2C), it has never been showcased in the Consumer Packaged Goods (CPG) industry. There are several barriers to this, namely (a) lack of data, (b) multiple-discreteness problem (where consumers make more than one brand purchase at a given time), (c) heavy brand-switching, and (d) varying budgetary constraints at the customer level. In this study, we attempt to lower these barriers by proposing a structural approach to model the CLV of a CPG customer. The proposed model accounts for competition within the consumer's budget-constrained utility maximization problem (a first in CLV literature.) We develop a hybrid MCMC algorithm to estimate parameters and implement the proposed model on consumer panel data obtained from AC Nielsen and IRI. Using our model formulation, we are also able to uncover the consumer's discretionary income (one of the key contributions of this study) even though it is unobserved by the researcher. Further, the context of our study also includes studying the impact of economic contractions (such as the financial recession of 2008-09) on consumer's (a) discretionary income, and (b) CLV. Our model specification allows us to evaluate how the consumer was impacted by the recession and how long it took for recovery. Finally, our approach allows making policy simulations that would be useful to managers in the CPG industry.

■ FB13

Room W330

Innovation II

Contributed Session

Chair: Jane Gu, Assistant Professor of Marketing, University of Connecticut, 2100 Hillside Road, Storrs, CT, 06269, United States of America, jane.gu@business.uconn.edu

1 - The Blessing of Targeted Innovations in a Competitive Market

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Technical product innovation is a key component of competitive strategy but a firm must introduce as well as create new technology to gain advantage. In fact, rapid advances in technology and product evolution can result in innovations not being fully understood by consumers. This makes choosing the optimal level of product innovation a challenging task in competitive markets. To examine this question, we study a firm's decision in terms of both the nature of innovation and pricing strategy when it enters a market with an incumbent that provides a basic product with technology that everyone understands. In a market with two consumers, an entrant chooses between introducing a new product that represents a) a drastic innovation targeted for one consumer or b) a general improvement of smaller magnitude that both consumers value. Drastic innovation implies advanced functions over the basic product but these new features may not be appreciated by all consumers. This implies that the willingness to pay for an innovation classified as drastic is often heterogeneous. Our analysis shows that, when an entrant introduces a drastically innovative product that is perceived heterogeneously, price competition with the incumbent leads to mixed-strategy equilibrium where the entrant maximizes profit from the consumer that is willing to pay extra for the new features. In contrast, an entrant with a new product classified as a general improvement sets price to capture business from both consumers. Under these conditions, sales for the basic product often tail off when the entrant introduces a new product that represents a general improvement of smaller magnitude over the basic product. The ability to substantially reduce the incumbent's sales suggests that general improvements should be globally preferred to drastic innovations with narrower appeal. This reasoning is flawed because product innovations have indirect effects on market competition. In particular, to create equivalent profit for an entrant, a general improvement needs to create significantly more value in the market than a drastic innovation for a sub-segment. The reason is that a locally drastic innovation relaxes price competition with the incumbent. This finding has managerial implications for firms that use new product development and pricing to compete for consumers who are heterogeneous in their acceptance of new technology.

2 - Product Extensions and Innovative Dimensions: An Application of Helly-type Theorems

Aharon Hibshoosh, Professor, San Jose State University and Lincoln University, One Washington Square, San Jose, CA, 95192, United States of America, rhibshoosh@gmail.com

Models of brand competition in attribute space with finite consumer ideals, e.g. Hotelling (1929), Hibshoosh (1974) assume that the consumer or consumer segment has either a perfectly inelastic demand or that the consumer would purchase at least some unit(s) of some offered brand. Furthermore, the space dimension is fixed. Thus, no new innovative product attribute dimensions are introducible. We assume instead that a competitor may offer either product extensions using only initial space attributes or innovate, augmenting the product with new attributes. We also assume a utility threshold, only above which a purchase would take place. This threshold is a function of many variables, including product price and product attribute dimensionality. Instructively, we initially assume that consumer utility indifference surfaces are convex, an assumption, we naturally relax. We assume an intricate cost structure. It depends on: a) the nature of the space, b) the spatial distribution of market demand and c) the production and marketing efforts. These efforts depend on the tightness of specs, structural constraints, the number of initial and new innovative dimensions, the number of offered products and other factors. By considering a profit maximizing competitor entry, under a variety of constraints, we raise several fundamental questions: What is the minimal number of products necessary to satisfy every consumer segment? What is the optimal number of new products? What is the optimal number of innovative attribute dimensions? What is the optimal product price? Employing Helly -type theorems, in particular theorems of piercing numbers, we provide optimization conditions and general and specific results.

3 - A Dynamic Approach Toward Consumer Learning During the Adoption of a Mobile Service System

Robert Ciuchita, PhD Candidate, Maastricht University (Service Science Factory), Tongersestraat 6, Maastricht, 6211 LN, Netherlands, rpa.ciuchita@maastrichtuniversity.nl, Gaby Odekerken-Schröder, Martin Wetzels, Dominik Mahr

Continuous societal and technological developments have made innovation increasingly important for company survival. Innovation is specifically relevant for network service offerings where collaborative value creation is strongly dependent on network externalities (e.g., a near filed communication payment service where consumers can use their smartphones instead of bank cards to make payments at specific locations). Though such innovations are typically aimed at improving the consumer experience, little is known about their negative effects, potentially discouraging consumer adoption. To address this gap, we propose consumer learning during network innovation as a means to overcome adoption resistance. Drawing from literature on innovation adoption, service marketing and social psychology we conceptualize learning during network innovation as an adaptation process facilitated by consumer interactions with a network of service providers offering the platform for the innovative service. To uncover how consumer learning during network innovation unfolds over time we collect subjective (three consumer surveys) and objective (over 28,000 transactions) data from a set of 700 participants in a mobile payment service roll-out over a period of 18 weeks. Through longitudinal growth curve modelling we analyze individual adoption curves while accounting for the learning mechanisms employed. Our results advance the service marketing and innovation adoption literature streams, by conceptualizing learning during network innovation and investigating how it can improve consumer experiences and accelerate adoption and acceptance of new, technology-oriented services. Moreover, our results can help companies foster consumer learning during network innovation (e.g., through marketing communication) and provide insights for the introduction of future innovations.

4 - Investigating Firm Strategies on Offering Consumer-customizable Product

Jane Gu, Assistant Professor of Marketing, University of Connecticut, 2100 Hillside Road, Storrs, CT, 06269, United States of America, jane.gu@business.uconn.edu, Giri Tayi

The advances in the digital economy have driven the trend among manufacturers, particularly those in the IT industry, to offer products that consumers can self-customize so as to satisfy their idiosyncratic needs. This study examines firm strategies on offering such consumer-customizable products. Our analysis shows that a monopolistic firm obtains a greater profit from offering a consumer-customizable product than from offering a pre-configured standardized product only if consumers are sufficiently capable to conduct the customization task; otherwise, it is more profitable for the firm to offer a standardized product. Moreover, consumers obtain a greater surplus when the firm offers the customizable product. We also consider the case when the firm is capable of offering both a customizable product and a standardized product and find that the firm benefits from offering both products than either if consumer customizing capability and the customization cost are not too high. Interestingly, when the firm offers both products, its effort in enhancing consumer customizability (e.g., offering free consumer training) always benefits both the firm and consumers, but its effort in increasing the value of the standardized product (e.g., offering more functions) can hurt both the firm profit and consumer surplus. Lastly, we find that in a competitive market, firms tend to adopt differentiated product offering strategies in equilibrium, with one offering the customizable product and the other offering the standardized product. Our theoretical results explain many interesting business practices and provide useful insights for marketing practitioners.

■ FB14

Room W100

Choice Models and Consumer Response

Contributed Session

Chair: Nian Wang, PhD, University of Connecticut, 5 Foster Drive, Willimantic, CT, 06226, United States of America, nian.wang@business.uconn.edu

1 - An Analysis of Consumer Preference for Smart Key and Car-home Connectivity Functions for Automobiles

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With the appearance of the “Smart Cars,” automobiles have come to play not only the role of transportation, but also diverse functions connected to other smart devices. Although these functions are not fully commercialized yet, it is highly probable that various technologies will be developed and commercialized as cutting-edge technology companies such as Apple and Google put spurs to collaborate with existing automobile industry. For example, technologies such as autonomous driving system, automated parking system, and voice recognition are constantly being developed. Therefore smart car functions can be one of the important deciding factors for consumers when purchasing a car and this trend will dominate in the near future. In this research, we analyzed consumer preference on smart key functions and car-home connectivity functions among different features of the smart car. The stated preference data that are used reflect the survey on current U.S drivers because there is little market data regarding smart key functions and car-home connectivity functions. Multivariate probit model which allows multiple choices and Bayesian Estimation are used in this research. This paper provides marketing strategies about smart car functions by understanding socio-demographic characteristics and consumer preference.

2 - When and Why Consumers Upgrade their Reserved Options: The Impact of Reservation Gap

Dai Yao, PhD Student, INSEAD, 1 Ayer Rajah Avenue, PhD Room (2nd floor), 1 Ayer Rajah Avenu, Singapore, NA, 13867, Singapore, dai.yao@insead.edu, Haiyang Yang, Hubert Gatignon

We examine how “reservation gap” – the time gap between making a reservation and actual consumption – impacts consumer decision making and firms’ profitability. We propose and show, using field data from one of the world’s largest car rental firms, that reservation gap has a U-shaped relationship with the likelihood of consumers upgrading their reserved options to more premium versions at the time of consumption. That is, reservation gap first decreases, and then increases the probability of upgrading. We argue that this pattern of behavior is driven by consumers’ differences in deliberative planning and memory decay. Consistent with this proposition, we find that the effect is stronger among consumers with lower level of expertise (e.g. less knowledgeable about car classes) and consumers who are more prone to memory decay (e.g. elderly). We conclude with a discussion of the implications for consumers and firms.

3 - Missing Information in Single and Joint Decision Contexts: A Structural Choice Formulation

Ann Wallin, University of Queensland, Colin Clark Building (39), Blair Drive, Brisbane, 4072, Australia, a.wallin@business.uq.edu.au, Len Coote

Consumers make product evaluations and subsequent choices in one of two basic modes: “single” and “joint” evaluation. Evaluation mode has been found to impact how easy and/or difficult product information is to evaluate and in turn to impact on consumer decision making and choice. Missing information further complicates this decision making process. Previous studies show missing attribute information impacts both the systematic and random components of utility for choice alternatives (Islam, Louviere and Burke 2007). Moreover, profiles with missing attribute level information can lead to intransitive preferences (Kivetz and Simonson 2000). This study contributes to the field by investigating if evaluation mode impacts the processing of missing information. Specifically, this study examines the impact of missing attribute level information on utility for choice alternatives in single vs. joint evaluation modes. This paper investigates two key questions. Firstly, does the impact of missing attribute information on utility differ between single and joint evaluation modes? Second, are there identifiable latent processes that define how consumers’ differ in their responses to missing attribute information? The current research uses discrete choice experiments (DCE’s) in a within-subjects design. A model catalogue is advanced with varying degrees of latent structure. The most fundamental of the models (McFadden’s conditional logit) explores differences in aggregate preferences due to variation in missing attribute information. Subsequent models add latent structure in one of two ways. Firstly, latent class models explore differences in aggregate preferences based on discrete segments of decision makers (in response to missing attribute information). Second, factor-analytic models are used to parameterize unobserved differences between decision makers (in response to missing attribute information). These models retrieve decision makers’ aggregate preferences and retrieve patterns in the preference heterogeneity in relation to how decision makers differ.

4 - An Empirical Study of Response Alternatives in Direct Mail

Nian Wang, PhD, University of Connecticut, 5 Foster Dr., Willimantic, CT, 06226, United States of America, nian.wang@business.uconn.edu, Joseph Pancras, Hongju Liu, Malcolm Houtz

Bad debt is an important part in the responses in direct mail, yet ignored by most of the current literature. Neither bad debt nor return is profitable for the firm. But in some cases bad debt can cost less than return, which can lead companies to consider counterintuitive strategies such as encouraging the customer who does not want to pay for the product to take on bad debt rather than return it. Thus the tradeoffs between bad debt and return constitute an important research problem. This paper proposes a model considering the impact of simultaneously including both bad debt and return in modeling consumer response to direct mail, and thus proposes a new way to reduce the loss caused by these two undesirable outcomes. The model also considers the influence of the firm's targeting policy on consumers' responses to avoid the endogeneity problem. And we study the impact of multiple waves of mailings along with the factors influencing the return and bad debt choice. Using the logit model, the paper empirically studies the data obtained from a Spanish book company. Our results show that the number of mailings negatively influences consumers' bad debt choice but does not significantly change consumers' return choice. The findings help us learn more about the return and bad debt choice, help the company reduce the cost of return, and also point to the potential for greater insights through more elaborate modeling of the firm's targeting strategies.

■ FB15

Room W130

Dynamic Structural Models

Contributed Session

Chair: Arun Gopalakrishnan, University of Pennsylvania, 3730 Walnut Street, 700 Jon M. Huntsman Hall, Philadelphia, PA, 19104, United States of America, agop@wharton.upenn.edu

1 - Consumer and Firm Learning in Durable Goods Market: The Value of Product Reviews and Pre-orders

Yuzhou Liu, Doctoral Student, New York University, Stern School of Business, 40 West Fourth Street, 921Tisch Hall, New York, NY, 10012, United States of America, yliu@stern.nyu.edu, Masakazu Ishihara

Firms in durable goods markets face demand uncertainty when consumers' perceived quality of new products remain uncertain. In such cases, product reviews may play important roles in determining the success of new products since they provide both consumers and firms with product quality information. On the one hand, firms can dynamically optimize their marketing decisions by taking available product reviews into account. On the other hand, firms can even advance sell their new products by offering pre-orders prior to product launch. Such defensive marketing strategy allows firms to market their products based on consumers' prior expectations, reducing the effects of potential negative reviews on sales. This paper introduces a dynamic structural model in order to (1) quantify the value of consumer reviews to both consumers and firms, (2) separately identify the impacts of critic reviews and consumer prior expectations on firms' profits, and (3) estimate the impacts of pre-orders on firms' profits and consumer welfare. In the presence of uncertainty about product quality and availability, forward-looking consumers strategically time their purchases in anticipation of additional product reviews, lower prices, and out-of-stock risks in the future. Firms are also assumed to be forward-looking to dynamically optimize their decisions in price, advertising, and production, by taking the impact of aggregate learning on the future demand into account. We present an application of the model to the case of the U.S. video-games industry. The results of our model provide broad managerial implications with respect to strategic informative advertising, dynamic pricing, and production strategies.

2 - Advertising Spillovers: Drug Detailing in Combination Therapy

Hongju Liu, Assistant Professor, School of Business,University of Connecticut, 2100 Hillside Rd, U-1041, Storrs, CT, 06269-1041, United States of America, hliu@business.uconn.edu, Pradeep Chintagunta, Qiang Liu

In combination therapies, an increasingly important phenomenon in the pharmaceutical industry, the simultaneous administration of two or more medications from multiple firms leads to complex complementarities and substitution effects between the drugs involved. Such effects complicate the marketing efforts for the drugs in the combination. Using data from the HIV/AIDS category, a canonical example of combination therapy, we first provide reduced-form evidence for the nature of relationships that exist among the various drugs. We then estimate a formal hierarchical Bayesian logit model across treatment regimens to examine how the detailing effort for one drug spills over to related drugs. Spillover effects create a tradeoff for the firm – increased detailing of one's own drug benefits sales of that drug but also those of other drugs in the combination. The latter effect could lead to free riding by the drug benefitting from the spillover and a lowering of its detailing. Based on our estimates for the effectiveness and spillover of detailing, we numerically solve a dynamic oligopoly detailing game to study this tradeoff and firms' optimal detailing strategies. We focus on situations in which firms have incentives to free ride on others' detailing efforts, and through counterfactual simulations, we examine how the incentive for free riding is affected by regulations and market structure. Our framework and findings can be generalized to co-marketing arrangements in other industries.

3 - A Two Stage Model of TV Viewers' Strategic Viewing and Zapping Behavior

Yang Shi, Hong Kong University of Science and Technology, Dept. of Marketing, Clear Water Bay, Hong Kong, Hong Kong - PRC, yolandashiy@ust.hk, Ying Zhao

TVR (TV rating) is crucial for advertising prices. Most of previous literature has studied the zapping (channel switching) behavior for better measurement of TVR. To our knowledge, this is the first paper to explicitly model the impact of viewers' strategic program viewing decision on their subsequent zapping behavior during commercial breaks. This is important especially when the program (e.g. drama) is continuously broadcast over a period: on one hand, viewers value the later episode more if they have viewed early episodes more (complementary consumption), and therefore are less likely to zap; on the other hand, previous viewing experience leads to more accurate expected valuation of latter episodes and concurrent programs of competing channels (learning), which could either increase or decrease zapping depending on the relative magnitude of the two expected values. This paper empirically models viewers' dynamic program viewing decision and their subsequent zapping behavior in two stages. At a given time point, viewers decide whether to watch the piece of episode in stage one, and then decide whether to zap or not in stage two. In both stages, viewers make decisions based on their updated expectations of programs from past viewing experience. Modeling complementary consumption and learning as two separate dynamic sources is a potential contribution, and a challenge. Our study provides insight on firm's TV advertisement slot allocation decision as well as TV station's decision on program scheduling.

4 - Which Curve Are You On? A Parametric Goodwill Model of Customer Churn and Usage

Arun Gopalakrishnan, University of Pennsylvania, 3730 Walnut Street, 700 Jon M. Huntsman Hall, Philadelphia, PA, 19104, United States of America, agop@wharton.upenn.edu, Eric Bradlow, Peter Fader

We introduce a methodology that integrates customer churn, usage, and learning using a dynamic goodwill model. Based on a utility maximization approach, our framework exploits information in each aspect of customer behavior to infer the goodwill model and each customer's lifecycle curve over time to make predictive statements about future customer activities. To accomplish this, we develop a goodwill model that parsimoniously captures a flexible family of lifecycle curves. Calibrating the model using micro-level customer and firm marketing data from a financial services firm, we quantify the heterogeneity in lifecycle curves, the inter-relationships across a diverse range of customer actions, and the potential gains from alternative firm marketing policies. Our approach also highlights the benefit of using a continuous goodwill model over discrete-state models.

■ FB17

Room W525

Meet the Editors II

Cluster: Special Sessions

Invited Session

Chair: Doug Bowman, Emory University, Atlanta, GA, United States of America, doug.bowman@emory.edu

1 - Meet the Editors II

Editors (or their representatives) from a number of major research journals in marketing will be available to answer questions about submitting papers and the review process. The journals expected to participate include Customer Needs and Solutions; International Journal of Research in Marketing; Journal of Consumer Research; Journal of Marketing; Journal of Marketing Research' Journal of Retailing; Journal of Service Research; Management Science; Marketing Letters; Marketing Science; Quantitative Marketing and Economics. Each participating will be part of one of the two Meet the Editors sessions: Thursday, June 10 10:30am-noon; Friday, June 11, 10:30am-noon.

Friday, 1:30pm - 3:00pm

■ FC01

Room E130 (Aud.)

Consumer Perceptions & Choice Processes

Contributed Session

Chair: David Curry, Professor of Marketing, University of Cincinnati, 427 CoB, Cincinnati, Oh, 45221-0145, United States of America, david.curry@uc.edu

1 - Remember the Bad? Goal Relevance, Valence, and the Encoding of Information in Consumer Decisions

Michael Hair, Georgia Institute of Technology, 800 W. Peachtree Street NW, Suite 325, Atlanta, GA, 30308, United States of America, michael.hair@scheller.gatech.edu, Samuel Bond

Because almost all consumer decisions involve the retrieval of information stored in memory (Bettman, 1979; Lynch Jr & Srull, 1982), it is important for marketers to understand how product information is encoded and retrieved. Prior evidence suggests a negativity bias, whereby negative information receives greater attention and elaboration (Fiske, 1980). In addition, however, it is now accepted that encoding and retrieval are goal-directed, such that memory is strongest for information passing a standard of personal relevance (Ehrlich & Johnson-Laird, 1982). Integrating these streams, we predict that the advantage of negative vs. positive product information in memory will be stronger for product attributes pertain to active consumption goals. Our experiments utilized a 2 (Goal Relevance) x 2 (Attribute Valence) within-subjects design, in which participants viewed information about twelve different attributes (goal-relevant or goal-irrelevant; positive or negative) for four automobiles, one at a time. Afterwards, they were tested on their memory for each attribute, using a multiple-choice format. Analyses revealed an interaction effect, whereby information was recalled more accurately if it was both negative and goal-relevant than if it was positive and/or goal-irrelevant. In contrast to prior work addressing specific variables in isolation, our findings show that the encoding of information during consumer choices depends jointly on the valence of that information and its relevance to active consumption goals. Our results highlight the need for marketers to understand the specific goals motivating consumers to obtain product-relevant information, as negative information about those goals may be better retained and more influential on subsequent choice.

2 - Rational Anchoring in Economic Valuations

Liang Guo, HKUST, Clear Water Bay Road, Hong Kong, China, mkguo@ust.hk, L. Jeff Hong

We challenge the interpretation of the anchoring effect as evidence that preferences are necessarily non-existing or arbitrary. If value is ex ante imperfectly known, experimental subjects can engage in information-gathering activities (i.e., deliberation) before stating their valuation. We show that endogenous deliberation can mediate the spurious correlation between arbitrarily generated anchors and experimentally elicited valuations. Consequently, the anchoring of economic valuations may simply be a disguise for the mediation of deliberation in the elicitation of valuations. Moreover, the anchoring effect can be non-monotonic, and we therefore highlight the importance of explicitly measuring deliberation in adequately uncovering the anchoring of valuations.

3 - Cash Back is Cash Forward: The Mental Accounting of Delayed Discounts

Lakshmi Vana, PhD Student, London Business School, Flat 5, 106 Sutherland Avenue, London, W9 2QP, United Kingdom, lvana@london.edu, Anja Lambrecht, Marco Bertini

Classical microeconomics assumes money to be fungible but a growing stream of literature on mental accounting has challenged this fungibility assumption. We use a large-scale data set from a cashback website to empirically test for mental accounting in the field. Cashback sites give consumers a discount when making a purchase online, provided that consumers click-through to the retailer from the cashback website. We empirically analyze the effect of receiving cashback on consumers' spending behavior. Our results indicate that larger cashback amounts shorten the time to next purchase and also increase the amounts spent in the next purchase. We test to rule out income effects and advertising effects as alternative explanations of our findings. Finally we discuss some managerial implications for the cashback industry.

4 - Neurological Implications for the Numerical Representation of Subjective Value

David Curry, Professor of Marketing, University of Cincinnati, 427 CoB, Cincinnati, Oh, 45221-0145, United States of America, david.curry@uc.edu, Xin (Shane) Wang

Much research in neuroscience focuses on the biological mechanisms that support the creation, storage, and assignment of subjective value. We address the question of how such activities should best be captured in algebraic representations so that analog activities of the brain are properly portrayed both symbolically and numerically. To this end, we use biological considerations that are strongly supported in the literatures of neuroscience, psychology and anthropology to identify three properties of neural functioning that influence subjective value, which we refer to as positivity, detectability, and boundedness. We use these conditions to derive a new algebraic form that represents how holistic subjective value emerges as the integration of neural signatures of part values. We show that the derived form, called r-additivity, naturally implies loss aversive behaviors and generates insights about other phenomenon of fundamental importance to cognitive science, including the conditions under which non-compensatory cognitive processing should emerge. We use our findings to offer implications for future efforts at the intersection of behavioral and neuro research in marketing.

■ FC02

Room E208

Consideration and Strategy

Cluster: Special Sessions

Invited Session

Chair: W. Ross Morrow, Assistant Professor, Iowa State University, Ames, IA, United States of America, wrmorrow@iastate.edu

Co-Chair: Erin F. MacDonald, Assistant Professor, Iowa State University, Ames, IA, United States of America, erinmacd@iastate.edu

1 - Is Modeling Consideration Important to Product Portfolio Design?

Minhua Long, Iowa State University, Ames, IA, United States of America, mhlong@iastate.edu, W. Ross Morrow, Erin F. MacDonald

Over the past decade design researchers have adopted marketing models of consumer choice within optimal product portfolio design. Operations researchers have done the same in a variety of problems, including assortment optimization. The majority of applications adopt traditional compensatory models that assume tradeoffs are made across all available products and features. The consider-then-choose model (Hauser & Wernerfelt, 1990), however, models a more realistic process in which consumers eliminate products using non-compensatory screening rules before performing compensatory evaluation over the remaining alternatives. Recent marketing research has shown that modeling consideration improves predictive power, but how directly this improvement is linked to superior product designs remains unclear. This research compares design decisions made using traditional compensatory choice models versus non-compensatory consider-then-choose models. Complications arise because the use of different models during the product development process requires different choice experiment designs, estimation tools, and design optimization methods. We describe a "synthetic data" simulation experiment in which respondent data is collected for a simulated respondent pool having a variety of non-compensatory and compensatory behaviors. Efficient and model-appropriate survey methods are used to estimate compensatory and consider-then-choose models. The estimated models are then used to optimize product portfolios and prices, enabling a comparison of the quality of decisions made using different models. While our simulation framework is general, we focus on results from a simulation based on a 2008 study of consideration in the new vehicle market (Dzyabura & Hauser, 2011).

2 - Examining Consideration Sets with Physical Prototypes

Erin F. MacDonald, Assistant Professor, Iowa State University, Ames, IA, United States of America, erinmacd@iastate.edu, Jinjuan She

The consider-then-choose decision model is most-often used in conjunction with computer-based experiments in which subjects first "consider" or "not" a number of potential product profiles, and then choose one of the considered profiles for final purchase. In this experiment, the approach is translated to a real-world experiment, in which in-person subjects reviewed prototypes with slightly different configurations, selected some for consideration, and then ultimately chose one product. After selection, TAB (Teaching Agents to Buy) and other written qualitative choice data were collected. The consideration exercise did not significantly support the main experimental hypothesis: that products visually expressing sustainability were more likely to be considered. However, TAB did significantly indicate changes in decision approaches in the presence of such products, while final choices were not affected. This suggests that testing consideration should be part of a more comprehensive approach to capturing nuances in decision processes, and is limited, like other choice modeling procedures, to capturing impacts of presented attributes only, while TAB can look deeper.

3 - The First is Always the Toughest: The Managerial Implications of Search Cost Savings

Fred Feinberg, University of Michigan, 701 Tappan Ave, Ann Arbor, MI, United States of America, feinf@umich.edu, Michael Palazzolo

If a consumer considers a product from a manufacturer's product line, considering additional products from that line can potentially be done at a reduced cost (Liu and Dukes, 2013). For example, if a consumer visits a Honda dealer to test drive an Accord, the incremental time, cognitive, and financial costs of also test driving the Civic would be less substantial than the costs associated with test driving a Toyota Camry, which might require a trip to a different dealer. Evaluating a Civic is relatively less costly because some of the consumer's evaluation costs (visiting a dealer) need not be repeated for alternatives beyond the first in a product line. Additional search cost savings may exist because consumers may obtain information about one product from others in the same line. E.g., if consumers read about Ford SYNC (Ford's in-vehicle communication system, available in each Ford vehicle) while researching the Ford Focus, they obtain information about all Ford vehicles. We construct a consideration set model that accounts for the possibility of search cost savings and apply this model to stated consideration set data from the automobile industry. We show that ignoring how the consideration of one alternative from a product line reduces the consideration costs for other alternatives from that line leads to an underestimation of the effectiveness of marketing decisions (e.g., advertising expenditure). This underestimation occurs because models that do not account for cost savings fail to recognize that an increase (decrease) in consideration frequency for any alternative in a product line contributes to an increase in consideration frequency for other alternatives in that line.

4 - Heterogeneous Shopping Processes, Choice Set Formation, and Marketing Decisions

Joffre Swait, joffre.swait.jr@gmail.com, Bart Frischknecht

This paper explores product pricing and positioning decisions when a customer choice population is represented by multiple distinct shopping processes matching different choice models. In such environments the expected outcomes for the firm can vary substantively based on the choice models selected. These findings should concern quantitative marketing practitioners whose typical practice is to select a single choice model to represent the choice behavior of the population of interest rather than tailoring the choice process to individuals or segments in the population. We illustrate the approach with examples from the mobile phone and personal travel lodging categories. Prior research has found evidence for distinct processes, or shopping archetypes, in both categories, including different rules for choice set formation and differences in preferences. We collected stated choice data for each product category. Respondents completed two experiments: The first consisted of a set of screening questions to identify shopping archetypes followed by a archetype-specific discrete choice experiment that allows for choice set formation. The second was a traditional discrete choice experiment. Distinct choice models for each shopping archetype were estimated using the first experiment. Two models, a compensatory mixed logit style model and a latent choice set formation model, were estimated using the second. A set of product strategy scenarios are evaluated focusing on differences in market share and revenue predictions for the various modeling regimes. Particular emphasis is given to interpreting the impact on firm decision making in light of the recognition of heterogeneous shopping archetypes, as opposed to the usual assumption that only tastes differ across population members.

■ FC03

Room E204

Public Sector Marketing & Non-Profit

Contributed Session

Chair: Paul Messinger, University of Alberta, School of Business, Edmonton, AB, T6R 2R6, Canada, paul.messinger@ualberta.ca

1 - Can Tourism Marketing Attenuate the Impact of International Economic Fluctuations?

Yuri Peers, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, Netherlands, peers@ese.eur.nl, Marnik Dekimpe, Harald van Heerde

Although international tourism is growing at a rapid pace, it is very sensitive to the business cycle. Given the dependence of many economies on tourism, governments are understandably eager to attenuate the impact of economic downturns on the number of tourists visiting their country. The question becomes whether this can best be achieved through pro- or countercyclical spending on tourism marketing. A further complication is that the business cycles of the targeted countries may be in different stages. While there is an emerging research stream on the role of business cycles in marketing, none of these studies consider the problem of dealing with multiple, international, business cycles simultaneously. To cope with this challenge, this study develops a Transfer Function Dynamic Hierarchical Linear Model to accommodate cross-sectional and longitudinal parameter variation in tourism marketing effectiveness. The application to tourist streams to New Zealand shows that the effectiveness has a downward, nonlinear trend over the past three decades. We also find that the effectiveness moves counter to the business cycle and that there are substantial differences in effectiveness across countries. We demonstrate how to improve the allocation of the tourism marketing across countries by capitalizing on longitudinal and cross-sectional parameter variation as well as on differences in business cycle stages across countries.

2 - Compliment Model in Crowdfunding Market

Yiwei Li, The Chinese University of Hong Kong, Room 1101, 11/F, Cheng Yu Tung Building, No.12 Chak Cheung Street, Shatin, N.T., Hong Kong, Hong Kong - PRC, victor.uniyccc4@gmail.com, Yuho Chung, Hui Cen

Crowdfunding market has recently emerged as an effective channel for individuals and organizations to seek monetary support from a group of contributors. When contributors support the project creators by helping them raising the money necessary to carry out the project rather than in the aim of obtaining returns, crowdfunding projects constitute a form of public goods. In public goods literature, the effect of prior contribution decisions on later participants' contribution decisions can be explained by two distinctive models, the model of compliment and the model of substitution. The model of compliment predicts subsequent contribution is positively related to prior contribution, while the model of substitution predicts opposite. This research aims to use a quantitative and confirmative approach to figure out which model is more applicable to crowdfunding market. We collect data from Demohour, the largest crowdfunding platform in China and observe that later participants will not deviate from prior contributors' decisions. In other words, people tend to conform to social norm rather than achieving altruism. Therefore, the model of compliment rather than the model of substitution should be applied to crowdfunded markets. We conclude by providing managerial implications and directions of future research for both practitioners and academia.

3 - Linking Marketing to Non-profit Performance

Denish Shah, Georgia State University, 35 Broad Street, Atlanta, GA, 30303, United States of America, shah@gsu.edu, Morris George

The mission of non-profit organizations typically entails intangible outcomes. This is coupled with the fact that the role of marketing in driving the performance of non-profit organizations in general and intangible mission based outcomes in particular has not been widely researched. In this study, we analyze data from a large non-profit organization to show how marketing can be related to mission based outcomes of non-profit organizations. Our findings indicate that contrary to general belief, marketing can play an extremely influential role in driving the performance of non-profit organizations. Furthermore, we illustrate how these findings can be applied by non-profit organizations to plan timely and cost-efficient individual level strategies and how such an approach can outperform traditional approaches. Overall our study is directed at augmenting the importance and influence of Marketing in non-profit organizations.

4 - Developing a Scale of a City's Citizen Engagement Orientation

Paul Messinger, University of Alberta, School of Business, Edmonton, AB, T6R 2R6, Canada, paul.messinger@ualberta.ca

Does your city make decisions for you or with you? To answer this question, we develop a multi-item scale of the public engagement orientation of a city. The scale measures a city department's public engagement orientation (to be referred to as the DECO scale, for Department Citizen Orientation). Concerning the value of such a scale as a tool, this scale (a) provides a means for benchmarking the public engagement orientation of cities and of different departments within a city; (b) helps diagnose means of improving the public engagement orientation of a department or of a city (if it is measured to be lower than desired); and (c) helps identify the level of citizen engagement accounted for by (i) sharing information, (ii) consultation about plans, or (iii) joint-decision making. We are not aware of such scales developed in the past (analogies exist in other fields, such as scales of the customer orientation of sales people and of customer perceptions of retail service quality). Our intended contribution is to provide a useful scale for cities when making what amount to marketing decisions concerning the provision of municipal services.

■ FC04

Room E201

Leveraging Unstructured Data; Big Data

Contributed Session

Chair: Sina Damangir, PhD Student, University of Houston, 334 Melcher Hall - Marketing, 4800 Calhoun Street, Houston, TX, 77204, United States of America, sdamangir@uh.edu

1 - Fashionology: A Textual Analysis Approach of Understanding Innovativeness and Influence of Fashion Theories

Yusan Lin, PhD Candidate, Pennsylvania State University, IST Building, University Park, PA, 16802, United States of America, yul189@psu.edu, Yilu Zhou, Heng Xu

Existing research has proposed various fashion theories, trying to explain how fashion works and why it works that way. Although conceptual and mathematical models have been proposed to conceptualize fashion trends, there has been limited empirical research conducted to validate these conceptual models with real data. Specifically, there is almost no research on examining or even defining fashion designers' innovation and influence trend. "Fashion is one of the most important creative industries", and yet the topic of examining design influences has not received enough attention in literature. We aim to fill in this gap by proposing a quantitative model of fashion influence network using fashion runway reviews from Style.com. We collected a total of 5,790 reviews that covers 754 designers and five types of design collections from Style.com across the year of 2000 to 2013. A design similarity model is developed based on our fashion thesaurus and an advanced textual similarly measure. Furthermore, we derive implicit influence links from our design similarity model and construct a design influence network. Using theories from Social Network Analysis and citation analysis, we can understand the innovativeness influence of fashion trend within the constructed network. We believe this work is one of the first to empirically examine the design innovativeness and influence relationships among fashion designers and to visualize the design influence network using fashion review data. Our work also goes beyond classical literature on citation analysis. While they often directly analyze data with explicit relationships, we focus on a unique dataset with hidden and implicit relationships derived from textual similarity measure. With the vast availability of textual information, such methodology can be applied in other fields as well.

2 - The Reach and Persuasiveness of Viral Video Ads

Catherine Tucker, Massachusetts Institute of Technology, Sloan School of Management, 100 Main Street, Room E62-536, Cambridge, MA, 02142, United States of America, cetucker@mit.edu

Many video ads are designed to go 'viral,' so that the total number of views they receive depends on customers sharing the ads with their friends. This paper explores the relationship between number of views and how persuasive the ad is at convincing consumers to purchase or adopt a favorable attitude towards the product. The analysis combines data on the total views of 400 video ads, and crowd-sourced measurement of advertising persuasiveness among 24,000 survey-responses. We measure persuasiveness by randomly exposing half of these consumers to a video ad and half to a similar placebo video ad, and then surveying their attitudes towards the focal product. Relative ad persuasiveness is on average 10% lower for every one million views that the video ad achieves. The exceptions to this pattern were ads that generated both views and large numbers of comments, and video ads that attracted comments that mentioned the product by name. We provide suggestive evidence that such ads remained effective because they attracted views due to humor rather than because they were outrageous.

3 - Structural Modelling using Chain Graphs

Kathrin Gruber, Research Assistant, WU Vienna University of Economics and Business, Department of Marketing, Welthandelsplatz 1, Vienna, 1020, Austria, kathrin.gruber@wu.ac.at, Thomas Reutterer

Marketing analysts are confronted with increasingly large amounts of nonexperimental (so-called "big") data and often struggle with the complex structure underlying to these kind of data. Combined with the lack of a well-structured data analytical problem and/or a weak (or at least ambiguous) theoretical background, traditional approaches to estimate structural equation models run the risk to fail. In such cases the researcher can only formulate a rough dependence/independence structure with respect to the relevant variables of interest and their ordering in the sense of being influential to or being influenced by other variables. We investigate the properties and the empirical performance of graphical chain models, a subclass of directed acyclic graphs as an alternative structural modelling approach. The method is able to detect linear as well as nonlinear relationships between structural variables in a multivariate model and does not expect a rigid underlying theoretical framework. The structural relationships implied by the chain graph are derived using a model selection procedure which requires just an initial ordering of the investigated variables. The value of chain graphs for structural modeling is demonstrated in a number of simulation experiments. Under various conditions, we systematically deteriorate violations of conventional SEM assumptions and compare the model performance using several fit indices (such as AIC, BIC, RMSE). The study shows that chain graphs produce stable and robust results and turn out to be a viable alternative for structural equation modeling.

4 - Leveraging Big Data on Co-consideration in Market Response Modeling

Sina Damangir, PhD Student, University of Houston, 334 Melcher Hall - Marketing, 4800 Calhoun Street, Houston, TX, 77204, United States of America, sdamangir@uh.edu, Rex Du, Ye Hu

From various sources of "Big Data" marketers nowadays can obtain a large amount of information on which products/brands are jointly considered by consumers (e.g., simultaneous mentions of multiple product/brand names in social media). Research has shown that such "co-consideration" data can be used to infer the underlying competitive market structure. In this study, we construct a framework to further leverage such data in improving market response modeling. In particular, we augment designated market area (DMA)-level sales and marketing mix data with data that captures how often consumers simultaneously request price quotes for various competing products. We develop a novel market response model through which one can identify (1) the position of each product on a latent perceptual map, (2) multiple consumer segments that differ not only in their responsiveness to marketing mixes but also ideal points on the perceptual map, and (3) the relative sizes of these segments in each DMA. We show, in the context of the U.S. automotive industry, how our proposed approach outperforms the standard approach, which contains only sales and marketing mix information in market response modeling.

■ FC05

Room E231

Online Advertising III

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Ashish Kumar, Assistant Professor, Aalto University School of Business, P.O. Box 21230, FI-00076 Aalto, Helsinki, Finland, ashish.kumar@aalto.fi

1 - Ad-serving Patents in Perspective: Challenges and Opportunities in Targeting Customers

Monica Perry, Associate Professor, University of Redlands, School of Business, 1200 E. Colton Ave, Redlands, CA, 92373, United States of America, monica_perry@redlands.edu, Kimberly Cass

The increasing centrality and importance of marketing-related analytics has grown exponentially as a result of rapidly increasing types and quantities of customer data. The increasing availability of online behavioral, personal and transactional data has provided an abundance of data on which to potentially develop predictive models of behavior for better targeting of marketing communications. Many challenges and opportunities exist for companies whose revenue depends on data analytics to effectively target advertising, particularly companies that serve online advertisements. While profiling online users and predicting relevant responses are likely proprietary models, they rely heavily on the availability of a variety of relevant data to be effective. Patents related to ad-serving/user data can provide a meaningful window into the relative strategic focus and approaches of companies whose primary business model is ad-serving. We reviewed 172 patents (2010-13) by Google, Yahoo, and Facebook relating to the collection of user-data, analytical approaches and adserving. We recognize patents as a critical, albeit, partial view of these companies' strategic approaches. Our analysis identified several patent patterns suggestive of the underlying strategic process for product development for ad-serving, attempts to address emerging user trends, such as cross-platform (device) user activity and capturing mobile data. Relevant to advertisers, we also identified potential issues of data timeliness, presumptions of past behavior as the best predictor of future behavior, and omission biases which may be at work with online advertising platforms.

2 - The Role of Sender and Message in Personalized Online Advertising

Alexander Bleier, University of Cologne, Albertus-Magnus-Platz 1, Cologne, 50923, Germany, bleier@wiso.uni-koeln.de, Maik Eisenbeiss

As the global online advertising pressure rises, generic ads noticeably lose effectiveness. In order to break through the clutter, firms increasingly tailor their advertisements to individual consumers based on their personal characteristics as well as inferred preferences and interests. However, while personalization should generally increase the value of an ad, the authors use field data to show that the same method of personalization increases click-through effectiveness for one firm while it decreases effectiveness for another. Drawing on communication theory, such differences in effectiveness may stem from characteristics of the ad's sender and its message. In a follow-up lab experiment, the authors investigate to which extend trust in the advertiser, a key characteristic of the sender especially in an online environment, can explain differential impacts of distinct personalization methods, as characteristics of the message, on consumers' advertising responses.

3 - Dynamic Likeability Effects on Virality of Online Video Advertisings

Edlira Shehu, Assistant Professor, University of Hamburg, Welckerstrasse 8, Hamburg, 20354, Germany, edlira.shehu@uni-hamburg.de, Tammo Bijmolt, Michel Clement

Understanding the relationship between consumers' evaluations of online advertisements and their willingness to share advertising content online is essential for successful viral advertising. This study focuses on the dynamics by which consumers build their overall virality judgments and sharing decisions of video advertising, based on moment-to-moment (MtM) likeability evaluations. Using a theoretical memory-based framework of temporal sequence effects and unique data from more than 48,000 respondents related to 120 advertisements from different product and service categories, we find that high likeability values at the beginning and end of a video advertisement are important, but the ending effect is greater. Trend effects also have significant impacts, such that declining patterns lower people's willingness to share. Interestingly, the positive effect of improving MtM patterns only emerges if the likeability trend in the beginning and ending part of a video does not decline. Further analyses reveal distinct MtM dynamic patterns over the timeline of online video advertisings and show that only peak and stable trajectories increase consumers' willingness to share. This study not only identifies and investigates the dynamics of MtM likeability patterns for online advertising and relates them to viral potential but also derives managerial implications for viral marketers.

4 - Impact of Digital (Dis) Engagements on Sales: Evidence from Email Advertising

Ashish Kumar, Assistant Professor, Aalto University School of Business, P.O. Box 21230, FI-00076 Aalto, Helsinki, Finland, ashish.kumar@aalto.fi, Ram Bezawada

One of the most enticing features of digital advertising is its ability to engage consumers individually. For example the reinvention of email beyond just as a personal or business communication tool gave rise to email marketing whereby individual consumers can be targeted with promotional marketing campaigns selectively. The factors driving the growth of email marketing are low cost, ability to target selectively, and measurable metrics to quantify its success rate. However, research in this area lacks in explaining how email advertising engages consumers and the influence of this engagement on sales. In this research using a novel email marketing database we conceptualize three kinds of consumer responses to an email campaign namely open, reopen, and unsubscribe rate that explain consumer (dis)engagement and find their impact on sales generated from the email campaign. We account for the effects of email attributes, marketing mix, and situational factors on consumer engagements and sales. The conceptual framework along with an empirical study provides several managerial insights into the adoption and adaptation of digital technologies as advertising tools for marketing.

■ FC06

Room E234

Online Customer Engagements

Cluster: Internet and Interactive Marketing

Invited Session

Chair: C. M. Sashi, Stewart Distinguished Professor, Florida Atlantic University, Boca Raton, FL, 33431, United States of America, sashic@fau.edu

1 - Love as a Main Opponent of Customer Retention on Online Dating Platforms

Andrea Dechant, Ludwig-Maximilians-Universitaat München, Geschwister-Scholl-Platz 1, Munich, Germany, dechant@bwl.lmu.de, Martin Spann, Anindya Ghose

The internet offers new ways of finding a partner. Many online dating platforms have developed successful business models. Since the competitive pressure in the market of online dating is tremendous, customer churn is an important issue. Churn in online dating is not only based on habitual churn reasons like dissatisfaction or competition. There is a further cause that has to be considered. When a customer finds a partner on the platform, the intent of the subscription to the platform is fulfilled, resulting in the termination of the contract. The aim of this study is the analysis of customer churn on online dating platforms, whereby different churn reasons are taken into account. We observe customers' activity on a leading European online dating platform, customers' sales and product data and link this information with survey data about termination reasons. The method of our choice is a competing risks hazard regression model. We find that communication as well as the level of logins on the platform are relevant drivers of customer churn. Furthermore, there are significant gender differences. In particular, men terminate above all because they found a partner; women's main termination reason is dissatisfaction. Therefore, the termination reason has to be taken into account when providing managerial implications based on our study.

2 - How Does the Concentration of Sales Changes as Consumers Move Online in the Apparel Industry?

Gonca Soysal, Assistant Professor, University of Texas at Dallas, 800 W Campbell Rd., SM 32, Richardson, TX, 75080, United States of America, gonca.soysal@utdallas.edu, Alejandro Zentner

While the "long tail hypothesis" was considered one of the best ideas of 2005 by industry observers (Businessweek 2005) and some academic studies have found support for this hypothesis (e.g., Brynjolfsson, Hu, and Smith 2003; Brynjolfsson, Hu, and Simester 2011; Zentner, Smith, and Kaya 2012), e-commerce does not necessarily need to affect all markets in the same way. In this paper we focus on the apparel industry, and use household-level panel data from three large apparel retailers in order to examine how e-commerce affects the concentration of sales. The apparel industry is substantially different than the canonical markets for books or movies that have captured most of the attention in the long tail versus superstar effects literature due to both supply side and demand side factors. One important observation is that, in this market, there are remarkable differences between the products that are popular in the online and the offline channels. We show that using some traditional long tail metrics, not accounting for the differences in locations of the distributions of online and offline sales, results in seemingly contradictory results regarding whether the concentration of sales increases or decreases as consumers move online in this market. We suggest a metric that accounts for the differences in both the location and concentration of the distributions of sales online and offline. Our results show that producers and retailers in this industry should shift their efforts toward products that are popular in the online channel, as consumers move online. However, contrary to some previous studies focusing on other industries, our results do not suggest that producers and retailers should shift their efforts toward a larger set of products or increase overall variety as e-commerce gains market share relative to sales at brick and mortar stores.

3 - Mobile Media and Customer Engagement

Vijay Viswanathan, Northwestern University, 1870 Campus Dr, Evanston, IL, United States of America, vijay-viswanathan@northwestern.edu, Su Jung Kim, Wei Xei, Edward Malthouse

Marketing has changed rapidly over the past 20 years, largely due to new technologies that have been introduced. Examples of such technologies include the Internet and mass adoption of personal computing devices, social media platforms, and more recently mobile devices. These technologies have created countless new ways for companies to communicate with their customers. Old communication models that used mass media to "broadcast" advertising messages at passive consumers are being replaced by interactive touch points that are meant to engage customers with the brand. It is important for organizations across most categories to understand how to interact with their customers in this environment. While there is widespread agreement that communication and promotion approaches must evolve with the new interactive technologies, companies are still figuring out the best way to engage with their customers and measure the effects of engagement. Many attempts at engagement fail to create value for consumers and instead disengage them. We must also understand how such poor interactions affect the customer relationship. The purpose of this article is to address these limitations. Here, we model engagement as a dynamic, iterative process using vector autoregressive (VAR) models. These models enable us to understand how increases in engagement as well as decreases in engagement (i.e., disengagement) affect purchase behaviors. The models are applied to a data set where engagement with a brand's mobile application (app hereafter) develops over time. The data set used to estimate the VAR models measures only customer behaviors such as mobile app usage and revenue-generating transactions, but extant definitions of engagement include both behaviors and cognitions. We supplement our VAR model with survey data to link cognitions with behaviors.

4 - Interactive Communication in B2B Relationships

Micah Murphy, Assistant Professor, Eastern Michigan University, 300 W. Michigan Avenue, 437 Owen Building, Ypsilanti, MI, 48197, United States of America, mmurph49@emich.edu, C. M. Sashi

This research investigates how different modes of communication with different levels of interactivity impact business-to-business (B2B) relationships. In the past decade, the Internet and particularly social media as a mode of communication have grown rapidly in both consumer and business markets. We examine the influence of face-to-face (F2F), digital, and traditional impersonal communications on the dimensions of interactivity. We use relationship marketing to identify the dimensions of interactivity: rationality, social interaction, contact density, and reciprocal feedback. We develop a framework to examine the impact of these dimensions in turn on satisfaction, commitment, and advocacy. Hypotheses linking the modes of communication with the dimensions of interactivity and relational outcomes are empirically examined with data from the commercial printing and graphic design industry. Confirmatory Factor Analysis is used to analyze the measurement and structural model. Personal F2F communication has the greatest impact on social interaction, reciprocal feedback, and contact density. Digital communication has a weaker effect on these dimensions and impersonal communication has the weakest effect. Personal and Digital have equal impacts on rationality and rationality is the only dimension of interactivity positively associated with relationship satisfaction. Contact density has a negative impact on relationship satisfaction and this negative impact is greater with F2F communication than it is with digital. The study shows that satisfaction has a significant impact on trust and affective commitment but not on calculative commitment. Trust and calculative commitment have no impact on advocacy. Affective commitment has a strong positive association with advocacy.

■ FC08

Room E304

Advertising Effectiveness V

Contributed Session

Chair: Peggy Tseng, Research Scientist, Yahoo Labs, 701 First Avenue, Sunnyvale, CA, 94089, United States of America, ptseng@yahoo-inc.com

1 - How Does Stock Market Respond to Advertising Rating? Evidence from Super Bowl Advertising

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US Today releases AdMeter score right after Super Bowl event. Based on this rating, media repeatedly airs best and worst Super Bowl advertising to the public, creating big word-of-mouth. Best Super Bowl advertising tend to enjoy favorable word-of-mouth effect while worst advertising is expected to receive negative attention from the public. Marketing literature indicates that positive information announcement such as quality award and marketing alliance positively affect investors but negative information announcement like product recall, new product delay, and deceptive marketing is negatively absorbed to stock market. Given this, Super Bowl advertising rating release is expected to have impact on stock market. For example, a firm value is increased (decreased) if the advertiser's Super Bowl ad listed as one of most (least) popular ads based on AdMeter. This study investigates how investors translate advertising rating (or performance) in the stock market using Super Bowl advertising case, assuming that positive announcement (i.e. most popular 10 ads) increases firm value while negative announcement (i.e. least popular 5 ads) reduces firm value. Preliminary event study result confirms that positive information announcements generate positive valuation. Contrary to the expectation, negative information announcements generate positive valuation. The rest ones other than most popular and least popular ones shows lowest firm value. This result is the first to show that negative market information may be favorably interpreted by investors in an entertaining context.

2 - Behavioral Advertising

Qiaowei Shen, Assistant Professor of Marketing, University of Pennsylvania, The Wharton School, 3730 Walnut Street, Philadelphia, PA, 19103, United States of America, qshen@wharton.upenn.edu, J. Miguel Villas-Boas

This paper considers the effect of firms sending advertising messages to consumers depending on their past purchase behavior. If past purchase behavior on a product category is positively correlated with a consumer having high preferences in another category, a firm may want to advertise more intensively to the consumers that purchased the former category, if possible. The paper finds that this will lead to higher prices in the initial category as consumers expect a possible additional surplus from the category affected by behavioral advertising. If receiving advertising does not yield too much dis-utility to consumers, firms end up better off because of both these higher prices, and the increased demand of better targeted advertising.

3 - A Semiparametric Approach to Estimate the Dynamic Effectiveness of Marketing Mix in Market Response

Venkatesh Shankar, Professor, Texas A&M University, Wehner Building, 4112 TAMU, College Station, TX, 77843, United States of America, vshankar@mays.tamu.edu, Zhongjian Lin

This paper focuses on the dynamic effectiveness of marketing mix variables in a competitive context involving the pioneer and followers. Conventional parametric market response models suffer from two important problems: near-multicollinearity of important covariates and misspecification. Because of near-multicollinearity among the marketing mix variables and largely linear specifications, the parametric model cannot accurately capture the dynamic effectiveness of marketing mix instruments over time. We propose a smooth-coefficient semiparametric model that allows for a flexible specification as well as mitigates near-multicollinearity. We estimate both the parametric and semiparametric models using data on the pioneer and early followers for two pharmaceutical categories. The results offer important insights into the dynamics of market response. Furthermore, we compare the parametric and semiparametric models with out-of-sample analyses. Counterintuitively, our results show that the semiparametric model outperforms the parametric model when there is adequate data, but the parametric model does well when the sample size is small.

4 - Marketing Models on Hadoop: Examining Effectiveness of Online and Offline Advertising

Peggy Tseng, Research Scientist, Yahoo Labs, 701 First Avenue, Sunnyvale, CA, 94089, United States of America, ptseng@yahoo-inc.com, Jimmy Yang, Hanyun Tsao

This paper aims to demonstrate how big data can be estimated via marketing models so estimation results are not only actionable but also sensible. Our research objective is to evaluate effectiveness of online and offline advertising on user behaviors with a website. Specifically, we examine whether and how display advertising, paid search advertising, and TV advertising can generate user interests and enhance their engagement level with the website. Our insights are based on the daily digital habits of tens of millions of consumers who were exposed to at least one form of advertising. We employ a zero inflated Poisson model with a logit link function and estimate the proposed model on Hadoop via Map/Reduce framework. Our results indicate that both online and offline advertising can generate user interests yet only paid search advertising can enhance user engagement and increase content browsing.

■ FC09

Room E301

Entertainment; Hedonic Goods I

Contributed Session

Chair: Sanjay Sisodiya, Assistant Professor of Marketing, University of Idaho, 875 Perimeter Dr MS 3161, Moscow, ID, 83844, United States of America, sisodiya@uidaho.edu

1 - Linking Moment-to-moment Arousal to Evaluation of Experiential Consumption

Anocha Aribarg, Associate Professor, University of Michigan, Ross School of Business, 701 Tappan St., Ann Arbor, MI, 48109, United States of America, anocha@umich.edu, Natasha Foutz, Eunsoo Kim

Consumers are not only rational decision makers who focus on functional features and benefits, but also emotional human beings who seek pleasurable experience. For any multibillion dollar industries profitable from experiential products, such as motion pictures, gaming, and sports, understanding consumer experience itself is of focal interest. The unique characteristics of experience, as opposed to utilitarian products, bring distinctive theoretical, measurement, and modeling challenges. Experience is largely affective, is not easily decomposable into a set of concrete attributes, dynamic, and social in nature. This research examines how consumers form their retrospective evaluation of a shared experiential consumption (e.g., watching a basketball game) based on moment-to-moment arousal driven by the experience. We use skin conductance device to collect moment-tomoment arousal and use a dynamic linear model in a hierarchical Bayes framework to relate the underlying characteristics (e.g., the extent of hedonic adaptation) of moment-tomoment arousal to the retrospective evaluation of the experience at the individual level. We further examine whether the pattern of relationship differs across consumption settings (e.g., different consumption goals, closeness of consumption partners).

2 - Competition-softening Effect of Uniform Pricing in the Movie Market: An Empirical Analysis

Jason Ho, Simon Fraser University, 8888 University Drive, Beedie School of Business, Burnaby, BC, V5A1S6, Canada, jason_ho_3@sfu.ca, Jing Yan, Charles Weinberg

Although movies vary widely in appeal, quality, and cost, a multiplex in most markets charges the same ticket price for all non-3D movies it shows and another price for all 3D movies. Hong Kong is a rare exception, where prices vary both within and across multiplexes. Building a dataset consisting of ticket prices and daily ticket sales by theater and title, we study this pricing puzzle empirically. To estimate the effects of different pricing policies on demand, we extend Bresnhan et al's (1997) Principles of Differentiation model by nesting it under the choice of whether or not to see a movie. This allows for a fuller study of primary demand effects from pricing while avoiding any prior restriction on whether a price cut by a multiplex for a movie would trigger more switching within the multiplex or switching from another multiplex showing the same movie. Using this flexible structural demand model, we study two opposing effects of differential ticket pricing: (1) an increase in profits due to the additional surplus the differential ticket prices can extract from consumers; (2) lower profits due to the competition intensified by each multiplex having a larger set of price alternatives. Our counterfactual simulations show that multiplexes on average realize a higher profit when using a differential as compared to a uniform pricing strategy. However, the profit improvement is relatively small, consistent with the view that the competition-softening effect of uniform pricing would offset the surplus-extracting effect of differential pricing in practice.

3 - The Impacts of Cultural and Economic Factors on the Commercial Success of Global Products

Sangkil Moon, Associate Professor, University of North Carolina, Charlotte, 9201 University City Blvd, Charlotte, NC, 28223-0001, United States of America, smoon13@uncc.edu, Arul Mishra, Himanshu Mishra

We examine country-level cultural and economic factors that influence consumers' acceptance of new global products across countries. Specifically, we focus on three cultural factors (the cultural distance between the product producing and consuming countries, the cultural content embedded in the global product, and the cultural compatibility between the product and the consumers of the product-consuming country) and one economic factor (the relative economic development status of the product-consuming country measured by the country's per capita GDP). In particular, we measure the cultural content embedded in the global product by eliciting the cultural content based on consumers' online product reviews. Furthermore, we regard the cultural compatibility as the condition where the global product contains cultural content familiar to the consuming country people. Based on the interactions of the cultural and economic factors, we propose three hypotheses concerning (1) the curvilinear impact of cultural distance moderated by economic development status, (2) the curvilinear impact of cultural distance moderated by cultural compatibility, and (3) the curvilinear impact of economic development status moderated by cultural factors. Our empirical test using USA movies' overseas box-office performances supports all the three hypotheses. Our empirical results also imply that the economic impact is primary and the cultural impact is more subtle and nuanced. Finally, we discuss the theoretical and practical implications of our empirical findings.

4 - Are Sequels Fireflies? An Investigation of the Timing of Movie Sequels

Sanjay Sisodiya, Assistant Professor of Marketing, University of Idaho, 875 Perimeter Dr MS 3161, Moscow, ID, 83844, United States of America, sisodiya@uidaho.edu, Steve Shook, Berna Devezer

The movie industry has high economic importance and has been an area of continued interest for researchers and practitioners (Eliashberg, Elberse, and Leenders 2006). Since movies have short product life cycles, there has been considerable emphasis placed on investigating the factors that influence the success of movies (e.g., Basuroy, Chatterjee, and Ravid, 2003; Ainslie, Dreze, and Zufryden 2005; Brewer, Kelley, and Jozefowicz 2009; Dhar, Sun, and Weinberg 2012). One area of interest is the study of franchises and the increasing trend to develop movie sequels (Eliashberg, Elberse, and Leenders 2006). Prior research has indicated that timing of sequels is critical to success (Basuroy and Chatterjee 2008) and that there might be short-time performance effects due to movie sequels (Dhar, Sun, and Weinberg 2012). Combined with the with pressures to produce blockbuster films that themselves have short life-cycles, there may be merit in delving deeper into timing related issues for sequels. Specifically, we investigate the role of launch timing and rate of adoption for movie sequels. We test our hypotheses using a data set of 150 movies. We control for demand and supply factors (e.g., production budget, length of movie, quality, etc.), and evaluate performance using worldwide box office revenue for each sequel. Results suggest that timing effects are important to consider and can influence both production and theatrical distribution.

■ FC10

Room E331

Category Management III

Contributed Session

Chair: Qiang Lu, Senior Lecturer, The University of Sydney, Business School, Sydney, Australia, steven.lu@sydney.edu.au

1 - What is the Assortment Size that Regulatory-focused Consumers Find a Value?

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The purpose of the research is to verify the preference of assortment size for regulatory-focused consumers by Construal Level Theory. Some past studies on assortment size show that consumers prefer a larger assortment size of products (Baumal and Ide 1956; Chernev 2003) and, in turn, the uncertainty related to preference becomes larger.(Kahn and Lehmann 1991). Other past studies show the opposite result, that is, a wider variety of assortment makes consumers harder to make a choice decision. The positioning of our research is not as to pro and cons of assortment size of many products. Rather, we focus on the effect of psychological distance regarding a preferable assortment size. Accordingly, we apply abstraction hypothesis and feasibility/desirability hypothesis by Goodman and Malkoc (2012). We develop a research design to examine the hypothesis by manipulating psychological distances and measuring the degree to which consumers value the assortment size in making a choice decision. Also, we investigate the conjecture that 1) promotion-focused consumers have a higher willingness to pay when their psychological distances are far given a larger assortment, and 2) prevention-focused consumers have a higher willingness to pay when their psychological distance are close given a smaller assortment under the feasibility/desirability hypothesis. We will show the results from several experiments.

2 - Learning What Customers Don't Want? Identifying Configural Antecedents of Product Attributes

Hsiu-Wen Liu, Assistant professor, Soochow University, 56, Sec.1, Kuei -Yang Street, Taipei, 100, Taiwan - ROC, hsiuwen@scu.edu.tw, Yu-Li Lin

Prior researches on consumer choice models primarily focus on identifying what customers want by estimating consumers' preferences in regard to each product attribute. The choice model, focusing on the net effects of independent variables on choice or purchase, has been the dominant one in marketing literature. However, the drawback of the choice model is that it cannot be used to analyze non-purchase behavior. Nonetheless, there is a possibility that we might learn from analyzing what consumers do not purchase. Moreover, the complex antecedent configurations leading to non-purchase behavior heretofore have not been well tested. This study fills the above research gap by studying consumer behavior in regard to non-purchased products, and by identifying complex causal antecedents of the non-purchase condition. A set-theoretic method, "fuzzy-set Qualitative Comparative Analysis" (fsQCA) is employed since it allows the analysis of complex causal conditions leading to an outcome in question. This method enables the researcher to take this complexity into account by using Boolean instead of matrix algebra, thus enabling several antecedent configurations to explain an outcome. Based on the data provided by an online retailer, the present study identifies configural antecedents of product attributes related to non-purchased products. The results show that the method works well for both product level and category level. This study contributes to the extant research on the application of fsQCA to non-purchasing consumer behavior. The results suggested that learning about non-purchased options could be informative for both manufacturers and retailers.

3 - Understanding Consumer Reaction Following a Promotional Out-of-stock

Frank Beke, Phd, Rijksuniversiteit Groningen, Nettelbosje 2, Groningen, Netherlands, f.t.beke@rug.nl, Laurens Sloot

In recent years some interesting studies on explaining consumers reactions toward out-of-stock have been published (e.g. Campo, Gijsbrechts and Nisol, 2003 and Sloot, Verhoef and Franses, 2005) However, no specific studies have been published that focus on an out-of-stock of a promotion. As promotional out-of-stocks (POOS) occur frequently and might cause huge dissatisfaction among consumers this study is academically as well managerially interesting. We have developed a conceptual model to explain consumer reactions to POOS. As dependent variables we focus on explaining behavioral (switching reactions) as well as attitudinal (dissatisfaction) responses of consumers. As independent variables we include promotional, product, store and situational related variables. Consumer reactions were derived by means of personal interviews behind the check-out of 8 different supermarkets. Consumers purchasing a promotion were asked for their response if the promotion hypothetically would have been out-of-stock. With this data conduction method we have tried to simulate a real POOS as close as possible. The dataset consists of a total of 200 consumer responses. Main outcomes show a POOS may severely damage consumer satisfaction and that promotional as well as product related factors are important in understanding consumer reactions towards OOS. Based on the main findings, several managerial implications to mitigate the effect of POOS are discussed.

4 - A Comparison of the Effectiveness of Price and Reward Promotions

Qiang Lu, Senior Lecturer, The University of Sydney, Business School, Sydney, Australia, steven.lu@sydney.edu.au, J. Xiao

As retail reward programs experience growing consumer participation, retailers have started to replace traditional price discounts with item-based reward promotions, which offer extra reward points for some selected items. This paper investigates the impact of item-based reward promotions on consumer purchase behavior using a multicategory consumer choice model, which captures consumer cross-category purchasing behavior. The results show that item-based reward promotion elasticity varies significantly across brands and categories and that there are cross-category effects of reward promotions. The authors also decompose price and reward point elasticities and find that reward point promotions and price discounts have different effects on primary and secondary demand. Furthermore, the authors find that consumer reward sensitivity may change over time; the more consumers become exposed to reward promotions, the less likely it is that they will make a purchase without rewards.

■ FC11

Room E334

Sales Management

Contributed Session

Chair: Andres Musalem, Duke University, 100 Fuqua Drive, Box 90120, Durham, NC, 27708, United States of America, amusalem@duke.edu

1 - How Do Sales Organizations Value Job, Firm or Industry Experience? A Study of Sales Career Paths

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Why do firms value one sales career path rather than another? Despite the ever increasing mobility in labor markets, little is known about successful sales career paths. Drawing on human capital theory, we specify a model examining the influence of job, firm and industry experience on the paychecks drawn by more than 76,000 salespeople and 13,000 sales managers over 17 years in France. The model, tested with data collected from a panel of career trajectories illustrates the importance of considering human capital when designing sales force compensation policies. We also contrast sales careers with accounting careers as accountants are usually performing more standardized tasks. We discuss the implications of our findings for research on sales compensation policies.

2 - Hunter-Farmer or Hybrid: An Analysis of Sales Account Management Models

Somnath Banerjee, Doctoral Candidate, University of Central Florida, 4000 Central Florida Blvd, Orlando, FL, 32816, United States of America, sbanerjee@bus.ucf.edu, Axel Stock

In industries in which customer relationship management and personal selling play an important role, firms face a choice between two types of sales account management models viz. the Hunter-Farmer model, in which separate sales persons are tasked with acquiring and retaining a customer, and the Hybrid model, in which the same sales person handles both acquiring and retaining a customer. In this research we assume that the hybrid model leads to a stronger customer-sales person relationship on account of closer customer-sales person interaction, and the Hunter-Farmer model leads to more efficiency because of specialization and investigate, how the choice between the two aforementioned models depends on the profit margin, firm specific switching costs, and strength of relationship between the customer and sales reps. We find that the relationship between choice of sales account management model and profit margin can follow a non-linear pattern such that the firm chooses the hybrid model at moderate levels of profit margin but prefers a Hunter-Farmer model when the profit margin is low or high. Further, we find that when the relationship between customer and sales rep is strong and the firm specific switching cost is below a threshold an increase in firm specific switching cost leads to faster increase in profits under the Hybrid model compared to the Hunter-Farmer model suggesting that customer's relationship with the sales rep and the firm specific switching costs can have a complementary relationship. In an extension, we study the competitive implications of the two sales account management models.

3 - Drivers of Salespersons' Performance Development

Margot Loewenberg, University of Zurich, Chair for Marketing and Market Research, Andreasstrasse 15, Zurich, 8050, Switzerland, margot.loewenberg@business.uzh.ch, Markus Meierer, René Algesheimer

Most firms rely heavily on the success of its salespersons. They build the direct link between a firm and its prospective and existing customers. Sales managers regularly evaluate salespersons' performance to optimize their short and long-term success, e.g., by identifying salespersons who need coaching in either increasing selling efficiency or building customer relationships. Besides the importance of transactional and relational factors, an analysis of salespersons' performance has to consider both, the impact of individual and contextual effects. Although dynamic in nature, both marketing research and practice rarely look at salesperson performance from a longitudinal perspective. Findings on the impact of time-varying individual and contextual determinants are scarce. Further, studies seldom analyze both, transactional and relational elements of the sales process. Filling those gaps, our research answers the following questions: (1) How does a salesperson's selling strategy influence sales performance development? (2) How does the customer-salesperson relationship influence sales performance development? Answering these questions allows sales managers to identify key determinants of salespersons' performance development and thus, paves the way for sales growth. We use a unique dataset covering monthly sales records from 2005 till 2013 of 905 salespersons of a leading European service firm. Applying nonlinear growth curve modeling, we shed light on the effect of a salesperson's selling strategy and ability to establish relationships with customers on sales performance. We address the implications of our results and give guidance for managers on how to use sales records to support decision making on salespersons' promotion, training, or even contract termination.

4 - Retail in High Definition: Using Video Analytics to Study Customer-Salesperson Interactions

Andres Musalem, Duke University, 100 Fuqua Drive, Box 90120, Durham, NC, 27708, United States of America, amusalem@duke.edu, Marcelo Olivares, Ariel Schilkrut, Nicolas Garcias

We discuss the use of a new data collection technique based on videos of customer experiences to better understand shopper behavior and support staffing decisions in the context of salespeople allocation decisions. More specifically, we explore the role of sales people at influencing the buying behavior of customers at a women's apparel store. The video data is combined with point of sales (POS) information and store traffic data. The use of these three sources of information introduces several challenges (i..e, endogeneity, measurement error and sample selection) for which we propose a methodology to address them. We begin by providing descriptive results, which show important differences between customers that received service from a salesperson and those who didn't, with the latter group exhibiting a much smaller conversion rate. These differences and results are subject to endogeneity, since salesperson-customer interactions may involve customers that are interested in buying a product and which may not need the interaction to make a purchase. Consequently, we propose and apply an instrumental variables approach to account for this endogeneity, which reveals that improving the fraction of customers having an interaction from its current mean of 50% to 61% (i.e., an improvement of one standard deviation), would lead to a 17% improvement in conversion. These estimates are used to evaluate the economic consequences of changing current levels of salespeople allocation under different scenarios.

■ FC12

Room W300

Pricing I

Contributed Session

Chair: Sudhir Voleti, Assistant Professor, Indian School of Business ISB, Gachibowli, Andhra Pradesh, Hyderabad, 500032, India, Sudhir_voleti@isb.edu

1 - Marketing Strategies given a Fairness-sensitive and Rational Market

Jihwan Moon, Doctoral Student, University of Florida, 1405 W University Avenue, Room 219, Gainesville, FL, 32611, United States of America, jihwan.moon@warrington.ufl.edu, Steven Shugan

Overwhelming empirical evidence finds: (1) individuals consider fairness but (2) competitive equilibria occur without considering fairness. Consistent with both findings, we develop marketing strategies with fairness-sensitive and rational (FAR) consumers. Ostensibly unfair actions are information events that (1) hurt consumers who view them as unfair and (2) deviate from the market norm. We find that adverse cost shocks cause the imposition of unfair fees regardless of whether consumers are fairness-sensitive. However, the transition to that equilibrium depends on whether consumers are fairness-sensitive. Unlike fairness-insensitive markets, in FAR markets, high-quality firms can delay ostensibly unfair actions. This delay creates a latent advantage (i.e., more price-insensitive customers) for fair firms. Surprisingly, we find that consumers, who previously enjoyed a surplus under the old market norm (because they were less price-sensitive), are more likely to view firm actions as unfair because they suffer a greater loss of surplus with the new norm.

2 - Recovering Price-cost Margins from Store-level Data: Estimation, Validation and Comparative Evaluation

Sudhir Voleti, Assistant Professor, Indian School of Business ISB, Gachibowli, Andhra Pradesh, Hyderabad, 500032, India, Sudhir_voleti@isb.edu, Ankit Anand

The paper considers the well-known problem of estimating price-cost margins (PCMs) from aggregate sales data. As part of the solution approach, it addresses two related empirical questions: Which general endogeneity-correction approach (using instrumental variables versus modeling the price setting process in the supply side), and independently, which general estimation procedure among fully parametric, Bayesian semi-parametric and fixed non-parametric better recovers PCMs. Together, the analysis yields six distinct modeling specifications for empirical evaluation. These six specifications are implemented on store-level sales data in the beer category, separately for low, middle and high price-tier stores, from the Dominick's Finer Foods database. Data on upstream (or wholesale) prices are used to validate PCM recovery across the six specifications for each store type. The results show that modeling the price setting process and applying a Bayesian semiparametric estimation method individually outperform alternative approaches in PCM recovery. Their combination seems most conducive (relative to alternatives evaluated) for estimating PCMs in empirical datasets on CPG grocery categories.

■ FC13

Room W330

New Product Adoption I

Contributed Session

Chair: Harmeen Soch, Associate Professor, Punjab Technical University, Kapurthala-Jalandhar Highway, Kapurthala, Pb, 144601, India, harmeensoch@yahoo.com

1 - A Multivariate Analysis of Pre-acquisition Drivers of Technology Adoption

Mark Ratchford, Assistant Professor of Marketing, Vanderbilt University, 401 21st Avenue South, Nashville, TN, 37203, United States of America, mark.ratchford@owen.vanderbilt.edu, Brian Ratchford, Michelle Barnhart

In this research, we study patterns of technology adoption across a range of consumer technological product categories. We first conducted a nationwide survey of adoption decisions and timing across a broad range of technological products and services. The survey included the Technology Adoption Propensity (TAP) index (Ratchford and Barnhart 2012), a multi-item psychometric scale that measures consumers' propensities to adopt new technologies as a dispositional trait. We measure respondents' scores on each of the four independent TAP index subscales as well as a range of demographic variables. Exploiting the panel structure of these data, we aggregate across products to focus on deriving segments of product categories owned by different groupings of consumers. Fitting a finite mixture model, we explore differences in predictors of product segment membership. We conclude by examining the managerial relevance of our findings.

2 - New Product Adoption Model: A New Approach

Masataka Yamada, Professor, Nagoya University of Commerce and Business, 4-4 Sagamine, Komenoki-Chou, Nissin, Aichi, 4700193, Japan, myamada@nucba.ac.jp, Toshihiko Nagaoka

This study proposes a conceptual model of the new product adoption model in which (1) the adopter's strength of the senses as an antecedent to the consumer innovativeness and (2) the adopter's state of mind with regard to the eagerness of adopting the innovation as an antecedent to the adoption behavior are newly added into the Midgley and Dowling's contingency model. Through our previous studies and the literature review it is generally known that domain-specific innovativeness (dsi) predicts actualized innovative consuming behavior better than innate innovativeness (domain-general innovativeness=dgi). We, however, have a problem to identify its domain before prediction is made. Therefore, introducing adopter's strength of the senses which consists of twelve items of physiological senses and psychologically sensitive traits used for long in Nikkei Research, we investigate if this will give us wider coverage than dsi. Next, we evaluate the effectiveness of adopter's state of mind right before the adoption. Regardless of type of product such as utilitarian or hedonic, adopter must be in highly excited state of mind when he adopts. This addition improves the accuracy of prediction for actualized innovative consuming behavior. We adopted a five point Likert scale for the measure called degree of WOW (degree of being excited). 300 respondents collected in an online survey using the monitor pool of a market research agency were analyzed by Bayesian SEM in AMOS 21. Preliminary results on the case of smartphone show that the sum of the senses influences positively on dsi, dgi and Waku Waku-do. Also according to the standardized total effect table, degree of WOW influences negatively on the adoption time most, then dsi, positively age, dgi, and negatively sum of senses in that order. The positive influence of dgi on adoption time indicates that dependent persons adopt smartphones earlier than independent persons because of product's network characteristics.

3 - Time Allocation and Durable Goods Adoption: Evidence from Emerging Market Households

Ishani Tewari, Yale School of Management, 165 Whitney Avenue, New Haven, CT, 06520, United States of America, ishani.tewari@yale.edu

Saving time is the central reason why households buy durables goods. In this paper, I study how a consumer's value of time influences this purchasing behavior. Intuitively, a household's consumption is generated by combining market goods and time. As the relative price of time changes, say due to higher wages, they will substitute expenditures for time. This tradeoff between time and goods implies that a consumer's time use patterns are intimately correlated with what they buy. I show the link between durable good adoption and time allocation using two approaches. The first is a detailed reduced-form analysis that exploits exogenous variation in price generated by the Chinese "Home Appliances to the Countryside" promotion. From 2007-2012, households residing in certain geographical areas were offered a thirteen percent rebate in specific durable goods categories. The provinces and categories subject to this rebate changed over the duration of the promotion. Combining this quasi-experimental setting with rich panel data spanning over two decades, I show that the rebate lowered the prices of the chosen categories and boosted adoption. This increased propensity to buy was strongest among middle class households. Furthermore, even within income groups, households with the most intensive time-use for a given household chore were the most likely to adopt the associated time-saving appliance. Second, I develop a structural model that explicitly shows how heterogeneous households allocate time across different activities. The econometric model is derived from a utility-maximizing framework which captures differences in marginal utilities between the decision to adopt a durable or not as well as the variation in utility for households across different income groups. Estimates from this time allocation model are used to predict the adoption of a time-saving technology— a washing machine— in response to a change in its price or changes in household wage.

4 - Impact of Corporate Image and Perceived Risk on the Usage Frequency of Smartphones

Harnek Gill, Research Scholar, Punjab Technical University, Kapurthala-Jalandhar Highway, Kapurthala, 144601, India, gill.harnek@yahoo.com, Kuljit Kaur, Amrinder Gill, Harmeen Soch

This research paper examines the impact of corporate image and perceived risk on the usage frequency of smartphones in emerging markets. Based on data collected from 500 customers categorized as frequent users and infrequent users using cell phones, a conceptual model is proposed and empirically tested using structural equation modeling. Exploratory factor analysis was conducted to refine the scale measuring corporate image, perceived risk and usage frequency. Confirmatory factor analysis was conducted to test the hypothesis. It was found that corporate image has a direct impact on usage frequency of smartphones. This finding is consistent for both frequent and infrequent users. Perceived risk was found to negatively impact the usage of smartphones for infrequent users whereas it had no effect on usage of frequent users. From an academic perspective, this study is first of its kind to have tested this relationship. From a managerial perspective, this research presents guidelines to companies manufacturing smartphones to reduce the perceived risk for infrequent users. This study makes both academic and practitioner contributions and concludes by drawing implications, presenting limitations and offering directions for future research.

■ FC14

Room W100

Advances in Choice Modeling IV

Contributed Session

Chair: Yang Li, Assistant Professor of Marketing, Cheung Kong Graduate School of Business, 1 East Chang An Avenue, Beijing, 100738, China, yangli@ckgsb.edu.cn

1 - Aggregate Demand Model with Consumer Search

SunAh Kim, PhD Student, Purdue University, 403 W. State Street, West Lafayette, IN, 47907, United States of America, kim1100@purdue.edu, Subramanian Balachander

Many marketers place significant importance on getting their brand considered by customers during the purchase process. For example, automobile companies in the US have run promotions to encourage consumers who are likely to purchase specific competitive models to test-drive their cars. However, most discrete choice models of demand do not allow for consumers' consideration set formation process. Especially, in a market with a variety of alternatives, consumers often do not have full information on the products and they often search a few products to learn more about the product and make a purchase decision given the set of considered brands. In such a context, it is important to model consumers' consideration set formation to correctly infer how search costs influence a consumer's choice and to study policy implications of running promotions such as test-drive promotion. In this paper, we propose a structural model of consumer's search behavior embedded in an aggregate discrete-choice demand model. We estimate this model using data from the US automobile market and obtain interesting implications.

2 - Incorporating Price-too-Low into Economic Utility Model: Hidden Alliance with Distributor

Minjee Sun, Korea University, 145,Anam-ro,Seongbuk-gu, Seoul, Korea, Republic of, sunminjee@gmail.com, Jaehwan Kim

Low price is attractive for marketing practice in general. On the other hand, existence of no buying when price is too low is another reality. This study incorporates a low threshold of price into the microeconomic utility framework. Low price threshold, if it exists, is important for marketers since the lower the threshold is, the more flexibility they have for price decisions. The model consists of screening and evaluation step in likelihood. Unlike the existing literature, the model allows for the threshold to vary according to manufacturer's decision on alliance with retailers. Among the possible variables, this study focuses on the distribution channel not owned by manufacturers, for it has an indirect features which the manufacturing firms can change the status relatively easily by contracts. The model was estimated against the conjoint data in travel service purchases where the posterior distributions are estimated via Bayesian MCMC. Managerial implications for manufacturers regarding the assessment of price promotion and its performance are offered.

3 - From Grey to Green: An Analysis of Environmental Factors on Consumer Choice

Wanqing Zhang, Purdue University, West Lafayette, IN, 47906, United States of America, zhang955@purdue.edu, Jia Li, Charles Moul

This paper investigates whether, and to what extent, environmental factors affect consumer behavior and choice. More specifically, we combine several unique datasets to study the impact of the air pollution level on purchase behaviors of passenger vehicles in China. To the best of our knowledge, we are among the first in the marketing literature to directly examine how environmental factors can affect purchase behavior of consumers. Our study in the world's largest automobile market which exhibits huge variation in pollution across cities and over time within cities provides a rich understanding of across and within city difference in car purchasing behavior, yielding important policy and managerial implications. The preliminary results show that air quality is a key criterion to consumers' purchase decision. Specifically, we find strong evidence that air pollution levels tend to positively affect the sales of highly fuel efficient cars. Moreover, consumers in cities with different development levels have different preferences for car fuel efficiency and other environmental friendly vehicle attributes.

4 - Variational Bayesian Inference for Big Data Marketing Models

Yang Li, Assistant Professor of Marketing, Cheung Kong Graduate School of Business, 1 East Chang An Avenue, Beijing, 100738, China, yangli@ckgsb.edu.cn, Asim Ansari, Zaozao Zhang

Large and streaming data sets are becoming increasingly common in business and marketing settings. Bayesian approaches for modeling marketing data rely on Markov Chain Monte Carlo (MCMC) methods that are computationally too slow for large volume data and cannot handle streaming data that arrives in real-time. These limitations prevent the use of widely used marketing models such as discrete choice models in Big-Data settings. In this paper we propose a streaming and stochastic variational Bayes (SSVB) approach that serves as a scalable and real-time alternative to MCMC methods for estimating Bayesian models in marketing. Specifically, we approximate the posterior distribution by a family of distributions indexed by a set of free parameters, and then optimize those parameters to find the member of the family that is closest to the posterior of interest. The resulting distribution, called variational distribution, is used to approximate the true posterior. Results on simulated data sets show that the proposed approach is faster than MCMC in accurately obtaining model parameters, and can update model parameters "on the fly" when new data points come in the middle of model estimation process. We also apply our SSVB approach to real data sets to demonstrate its effectiveness in marketing problems.

■ FC15

Room W130

Pricing Policy

Contributed Session

Chair: K. Sivakumar, Arthur Tauck Chair and Professor of Marketing, Lehigh University, 621 Taylor Street, Bethlehem, PA, 18015, United States of America, k.sivakumar@lehigh.edu

1 - Pay What You Think Fair (PWYTF)

Atanu Adhikari, Associate Professor, Indian Istitute of Management, IIMK Campus, Kunnamangalam, Kozhikode, 673570, India, atanu.adhikari@iimk.ac.in

While PWYW pricing strategy involves customers in deciding price of a product, it carries the risk of incurring loss for the seller in long run. Pay What You Think Fair (PWYTF) pricing mechanism, the authors propose, motivates the buyer to pay a price that he thinks fair, which increases buyer's willingness to pay significantly and maintain it for prolonged duration. PWYTF pricing mechanism with fairness framing can generate significantly higher revenue and profit over a long period of time. Author conducted three field studies to show that PWYTF pricing strategy is sustainable and a win-win solution for both seller and buyer. Author show that over a period of time, willingness to pay under PWYW pricing decreases while willingness to pay under PWYTF remains stable helping marketers to increase sales, revenue and profit. The study also found that additional initiative of the seller about social activity by the way of charitable giving did not provide any significant utility to buyer. This confirms that though material utility increases with increase of stakes, the utility derived from the fairness of the outcome does not increase with repeated social initiatives. The study also show the effect of social pressure on buyer's increased willingness to pay in PWYTF pricing context. The study developed five constructs namely Buyer's fairness perception of payment, Perceived seller's fairness, perceived social pressure, customer satisfaction and customer loyalty and tested their validity and reliability with 348 survey data. Author then showed the effect of these dimensions on buyer's willingness to pay under PWYTF pricing mechanism.

2 - Consumer Choice in Price-free Situations

Seshan Ramaswami, Associate Professor of Marketing Education, Singapore Management University, 50 Stamford Road 0501, Singapore, 178899, Singapore, rama@smu.edu.sg

Consumers usually make choices in a purchase context, where the individual items have prices, and the consumer is exchanging money for perceived value. The primary role of the price then is to indicate the seller's perception of the value proposition inherent in the offer (product/service); consumers judge the price of the offer against the value perceived to make judgments and choices. In these cases, consumers have to make two tradeoffs: the attributes of choice items against each other, and the attributes of the best product against the price paid. Consumers may also make quality inferences about the choices based on prices, or use the price to make comparable otherwise non-comparable alternatives. However in many judgment and choice situations, consumers make choices in a price-free environment e.g. choosing among drinks in a refrigerator, choosing a "free gift" when making another purchase, choosing among products all of which are free (like an email service). How does the absence of price information affect choice processes and choice outcomes? This paper presents a conceptual framework for classifying these choice free contexts, and for understanding the determinants of choice in these situations.

3 - Experimental Analysis of Buyer Behavior in Opaque Selling Markets

Lucas Stich, Ludwig-Maximilians-Universität München, Geschwister-Scholl-Platz 1, Munich, Germany, stich@lmu.de, Martin Spann

Opaque selling refers to a selling strategy in which a seller conceals some attributes of the product from the customers and reveals them only after a non-refundable purchase has been made. By offering customers a choice involving uncertainty, the opaque product serves the seller as a mean to induce customers to reveal their idiosyncratic preferences. Customers with weak product preferences are motivated to choose the discounted opaque product, whereas customers exhibiting strong preferences are less likely to opt for the uncertain option. The application and optimal design of opaque mechanisms requires a thorough understanding of the drivers of buyer behavior in such settings. In a series of laboratory experiments, we thus aim to identify the causality and strength of factors that drive customer behavior in opaque selling markets. In particular, we study how customers' product choice and willingness-to-pay for the opaque product is influenced by factors such as strength of preferences, attitude towards risk and ambiguity as well as the choice-elicitation interface to reduce opaqueness.

4 - Modeling the Impact of Patterns of Price Reductions

K. Sivakumar, Arthur Tauck Chair and Professor of Marketing, Lehigh University, 621 Taylor Street, Bethlehem, PA, 18015, United States of America, k.sivakumar@lehigh.edu

Much prior research has focused on (1) the effectiveness of price promotions on brand choice, (2) the role of frequency and depth of price promotions, and (3) the differential effectiveness of price promotions for high-tier and low-tier brands. This research builds on existing research by examining the intersection of these three research domains and contributes new knowledge by developing an analytical framework to incorporate the role of proximity and sequence of price promotions. Specifically, the research explores how proximity and sequence of price promotions can function as important boundary conditions for the promotional effectiveness of brands in different tiers. Several results are derived to take into account different marketplace scenarios and model parameters. The results provide a more nuanced understanding of the impact of price changes by brands in different tiers and offer some useful guidelines for managing brand pricing strategies.

■ FC16

Room W320

Coca-Cola's Real-time Marketing at the 2014 FIFA World Cup

Cluster: Special Sessions

Invited Session

Chair: Doug Bowman, Emory University, Atlanta, GA, United States of America, doug.bowman@emory.edu

1 - Coca-Cola's Real-time Marketing at the 2014 FIFA World Cup

Doug Bowman, Emory University, Atlanta, GA, United States of America, doug.bowman@emory.edu

Marketing executives from the Coca-Cola Company will discuss their real-time marketing strategies, execution, and monitoring efforts at the 2014 FIFA World Cup in Brazil.

Friday, 3:30pm - 5:00pm

■ FD01

Room E130 (Aud.)

ISMS Doctoral Dissertation Proposal Competition Winners

Cluster: Special Sessions

Invited Session

Chair: K Sudhir, Yale School of Management, 135 Prospect Street, New Haven, CT, United States of America, k.sudhir@yale.edu

1 - Beyond the Last-touch: Attribution in Online Advertising

Ron Berman, University of California-Berkeley, Berkeley, CA, United States of America, ron_berman@haas.berkeley.edu

Advertisers who run online advertising campaigns often utilize multiple publishers and predominantly compensate them based on effort (CPM) or performance (CPA) and a process known as Last-Touch attribution. Using an analytical model we show that CPA schemes cause moral-hazard while existence of a baseline conversion rate by consumers may create adverse selection. The analysis identifies two strategies publishers may use in equilibrium — free-riding on other publishers and exploitation of the baseline conversion rate of consumers. Our results show that when no attribution is being used CPM compensation is more beneficial to the advertiser than CPA payment as a result of free-riding on other's efforts. When an attribution process is added to the campaign, it creates a contest between the publishers and as a result has potential to improve the advertiser's profits when no baseline exists. Specifically, we show that last-touch attribution can be beneficial for CPA campaigns when the process is not too accurate or when advertising exhibits concavity in its effects on consumers. As the process breaks down for lower noise, however, we develop an attribution method based on the Shapley value that can be beneficial under flexible campaign specifications. To resolve adverse selection created by the baseline we propose that the advertiser will require publishers to run an experiment as proof of effectiveness. Although this experiment trades-off gaining additional information about the baseline with loss of revenue from reduced advertising, we find that using experimentation and the Shapley value outperforms campaigns using CPM payment or Last-Touch attribution.

2 - Designing Freemium: a Model of Consumer Usage, Upgrade, and Referral Dynamics

Clarence Lee, Harvard Business School, Boston, MA, United States of America, clee@hbs.edu, Sunil Gupta, Vineet Kumar

Over the past decade "freemium" (free + premium) has become the dominant business model among Internet start-ups for its ability to acquire and monetize a large install-base with limited marketing resources. Freemium is a hybrid strategy where a firm offers both a perpetually free but limited version of their service, and a premium version with enhanced features that require a fee, and where firms regard the free product as a promotional tool. The model leads to several questions interesting to marketers, which we explore in our framework. How much value should the free product provide to consumers relative to the premium product, given the inherent cannibalization effect? What is the right referral bonus incentive to offer to customers? How does sharing influence customers' likelihood of upgrading to the premium product? We develop an empirical microfoundations-based framework to understand dynamics of consumer behavior of plan choice, usage, and referral in the freemium setting and apply it to a novel panel data set from a leading cloud-based storage service. Using Bayesian methodology, we estimate the structural model and perform counterfactual analysis where we vary the price and referral incentives to explore the response in customer upgrade, referral and usage behaviors. Through this, we characterize both the individual value of consumers to the firm as well as the network value of customers, providing a mechanism to capture the impact of consumer-to-consumer interactions.

3 - Standard or Optional: Add-on Policy under Vertical Differentiation

Song Lin, Massachusettes Institute of Technology, Sloan School of Management, E62-582, 77 Massachusetts Avenue, Cambridge, MA, 02139, United States of America, songlin@mit.edu

In many competitive industries firms sell an add-on on top of a base product (e.g., hotels sell Internet). An important question is when the firms should bundle the add-on with the base as standard, and when they should sell it separately as optional to screen consumers. Using a large sample of U.S. hotels I find evidence that higher-end hotels are less likely than lower-end hotels to bundle add-ons such as Internet, local calls, and breakfast. Motivated by this fact, I develop a theory of add-on policy under vertical differentiation to address two questions: (1) why and when would product policy be different for vertically differentiated firms? (2) how would vertical differentiation affect profitability? I establish that in equilibrium the competing firms may diverge in their product policy. While the firm of higher quality always sells the add-on as optional, the low-quality firm's policy depends on the cost-to-value ratio of the add-on. If the ratio is too high (costly add-on), then the low-quality firm does not sell the add-on at all. If the ratio is moderate, then the firm sells it as optional. If the ratio is sufficiently small, then the firm bundles the add-on with the base. Surprisingly, an optional add-on may intensify competition and thus hurt firm profit, in sharp contrast to the predictions in the literature. The underlying mechanism is that an optional add-on introduces fierce price competition over the consumer segment who faces tradeoff between buying only the base good from the high-quality firm and buying the bundle from the low-quality firm. Therefore, prices may be competed down to a point where both firms end up being worse off.

■ FD02

Room E208

Internet & Interactive Marketing

Contributed Session

Chair: Upender Subramanian, Assistant Professor, University of Texas at Dallas, 800 W Campbell Rd., SM 32, Richardson, TX, 75080, United States of America, upender@utdallas.edu

1 - Heard You But Don't Know You: Targeting using Word-of-Mouth

Manaswini Bhalla, Assistant Professor, Indian Institute of Management, Faculty Block C 202, Indian Institute of Management, Bangalor, Bangalore, KA, 560076, India, manaswinib@iimb.ernet.in, Sreelata Jonnalagadda

Firms are increasingly interested in managing the buzz for their products through engineered word-of-mouth. For example, websites like bzzagent.com enable firms to select agents to try new products for free and spread their opinion about them. In contrast to the typical word-of-mouth strategies that emphasize the quantity of buzz, we build a model that focuses on the source of word-of-mouth. In our paper, we allow the firms to choose the type of an agent in a market where consumer preferences and product characteristics are distributed over a horizontal attribute space. Typically, word-of-mouth strategies emphasize the importance of generating positive buzz. However, we find that a negative word can also be good news as it can positively influence consumption. In exploiting word-of-mouth, it is natural for a firm to pick agents whose preferences align with its product type. In contrast, we find that, a strategy where firms pick aligned agents always (or with same intensity) does not change consumers' beliefs and hence has no influence. Therefore, this emphasis on aligned agents is not necessary. We also find that in a non-uniform consumer population, the right word-of-mouth strategy enables the firm to target its product to a selective segment of consumers. When consumer base is uniform, we find interesting instances where the firm can persuade(dissuade) previously disinclined (inclined) consumers by the choice of its word-of-mouth strategy.

2 - An Equilibrium Analysis of Daily Deal Strategies and Consumer Learning of Merchant Quality

Upender Subramanian, Assistant Professor, University of Texas at Dallas, 800 W Campbell Rd., SM 32, Richardson, TX, 75080, United States of America, upender@utdallas.edu, Ram Rao

Daily deal websites have emerged as a popular means for small businesses to attract new customers. Some daily deal websites display the number of deals sold in real time enabling customers to learn how others are responding to the deal before they buy. We refer to such websites as social coupon platforms and examine when and why they might occur. We analyze a market where new customers are uncertain about the quality of a merchant offering a deal and a high-quality merchant has a larger base of existing customers. We show that in such a market, reporting deal sales can facilitate social learning about quality and a social coupon platform can help a high-quality merchant attract more new customers. This is because under certain settings a high-quality merchant cannot signal its quality through price and the platform cannot screen out the low-quality merchant through its contract. Surprisingly, we find that social learning about quality can also hurt the high-quality merchant and therefore be counterproductive. Counterintuitively, it can also be profitable for the platform to screen out the high-quality merchant and serve only the low-quality merchant. Interestingly, unlike traditional coupons, we find that a social coupon can be more profitable when existing customers who would have otherwise paid the regular price avail the deal. We further show why some social coupon platforms may provide merchants an upfront subsidy.

■ FD03

Room E204

Marketing Resource Allocation

Contributed Session

Chair: Rob Waiser, PhD Candidate, University of Toronto, Rotman School of Management, 105 St.George St, Toronto, ON, M5S 3E6, Canada, robert.waiser11@rotman.utoronto.ca

1 - On the Near Impossibility of Measuring the Returns to Advertising

Randall Lewis, Economic Research Scientist, Google, Inc., 1600 Amphitheatre Parkway, Mountain View, CA, 94043, United States of America, randall@econinformatics.com, Justin Rao

Classical theories assume the firm has access to reliable signals to measure the causal impact of choice variables on profit. For advertising expenditure we show, using twenty-five online field experiments with major U.S. retailers and brokerages ($2.8 million expenditure), that this assumption typically does not hold. Evidence from the randomized trials is very weak because individual-level sales are incredibly volatile relative to the per capita cost of a campaign — a "small" impact on a noisy dependent variable can generate positive returns. A calibrated statistical argument shows that the required sample size for an experiment to generate informative confidence intervals is typically in excess of ten million person-weeks. This also implies that selection bias unaccounted for by observational methods only needs to explain a tiny fraction of sales variation to severely bias observational estimates. We discuss how weak informational feedback has shaped the current marketplace and the impact of technological advances moving forward.

2 - Managers Are People, Too: Why Do Sales Managers Lobby for Bigger Budgets?

Rob Waiser, PhD Candidate, University of Toronto, Rotman School of Management, 105 St.George St, Toronto, ON, M5S 3E6, Canada, robert.waiser11@rotman.utoronto.ca

Budgeting is the most widely-used management practice among firms worldwide. Many areas of the marketing literature, however, tend to disregard or abstract away from the effects of budgets on managerial decisions, typically by treating the firm and manager as interchangeable. This paper is the first to model sales force incentive compensation design by a sales manager with motivations distinct from those of her firm. When a manager's performance is measured based on sales rather than profits, she will always prefer to offer larger incentives to her salespeople, so the firm uses a budget to constrain those incentives. This is critical when the manager has private information about the salespeople, in which case the firm is unable to discern whether she lobbies for a larger budget in the pursuit of higher profits or simply higher sales. The accounting literature uses interviews, questionnaires, case studies and experiments to examine conditions affecting whether managers seek larger budgets, typically assuming that the motivation to do so is selfish. I use a game-theoretic model to show that not all attempts by managers to procure larger budgets are solely self-serving. Instead, under certain conditions, a manager serves her firm's interests in addition to her own by lobbying for a larger budget. I define the conditions under which managers with varying degrees of self-interest are expected to lobby. I then offer implications for firms on how they should set not only their incentive budgets, but their policies on managerial participation in budget-setting as well. In particular, these decisions should depend on the firm's beliefs about its manager's type.

■ FD04

Room E201

Leveraging Big Data

Contributed Session

Chair: Xiao Liu, Carnegie Mellon University, 5000 Forbes Avenue, Tepper PhD Program, Pittsburgh, PA, 15217, United States of America, xiaoliu@andrew.cmu.edu

1 - Visualizing Asymmetric Competition between More than 1,000 Products using Big Search Data

Daniel Ringel, Goethe University Frankfurt, Lehrstuhl für Electronic Commerce, Grueneburgplatz 1, Frankfurt, 60323, Germany, dringel@wiwi.uni-frankfurt.de, Bernd Skiera

Understanding competition is essential for every firm. Unfortunately, information on who competes with whom is scarce. Traditional research approaches such as surveys and panels are time consuming, expensive, and usually not well applicable to markets with large numbers of consumer durables. Big search data from a product and price comparison site, however, allow for observing millions of consumers search and compare thousands of products, revealing which products consumers consider to be “competing” alternatives. We propose a new model that uses big search data and combines methods of multiple research disciplines to analyze and visualize asymmetric competition in durable categories containing more than a thousand products. We apply our method to 1124 LED TVs of 56 brands and visualize competition between them in a two-dimensional space. We find face valid results, strong asymmetric relationships among competing products and a competitive market structure organized by brand, display size and price. We validate our findings with actual market shares and find that product and price comparison site data provide higher external validity than search data from Google and Amazon.

2 - A Structured Analysis of Unstructured Big Data Leveraging Cloud Computing

Xiao Liu, Carnegie Mellon University, 5000 Forbes Avenue, Tepper PhD Program, Pittsburgh, PA, 15217, United States of America, xiaoliu@andrew.cmu.edu, Kannan Srinivasan, Param Singh

Accurate forecasting of sales/consumption is particularly important for marketing as such information can be used to fine-tune marketing budget allocation and overall strategy. In recent years, online social platforms have produced unparalleled data on consumer behavior. However, there are two challenges that have limited the use of such data to get meaningful business insights in marketing. First, the data is typically in an unstructured format such as text, images, audio, video etc. Second, the sheer volume of data makes standard analysis procedures computationally unworkable. In this study, we combine methods from cloud computing, machine learning and text mining to illustrate how content from twitter can be effectively used for forecasting purposes. We conduct our analysis on a staggering volume of nearly two billion tweets. Our main findings highlight that, in contrast to just the surface level measures, such a volume of Tweets or sentiment in Tweets, the information content of the tweet and their timeliness improve forecasting accuracy significantly. Our method endogenously summarizes the information contained in Tweets by classifying it based on content matching across Tweets. The advantage of our method is that the classification of the Tweets is based on what is in the Tweets rather than preconceived topics that may not be relevant. We also find that in contrast to Twitter, the online search data (captured through google trends) is a very weak predictor of TV show demand. This is because while users tweet about the TV show before, during and after the show, but the TV show typically lags the show.

■ FD05

Room E231

Social Media and e-Commerce

Contributed Session

Chair: Nikunj Jain, Indian Institute of Management, Indore, Rau - Pithampur Road,, Indore, 453331, India, f11nikunjk@iimidr.ac.in

1 - Peer Effects, Content Creation and Competition for Attention in Social Media Platforms

Anjana Susarla, Associate Professor, Eli Broad College of Business, Michigan State University, N230, North Business Complex, Bogue St., East Lansing, MI, 48824, United States of America, asusarla@broad.msu.edu, Ramayya Krishnan, Bin Zhang

While prior research has studied how individuals consume content on social media platforms, limited work exists on how contributors are motivated to create content in an environment of limited attention. We examine the role of peer production on YouTube, where content creators are competing for attention. The YouTube model blurs the boundaries between content creators and content consumers, and encourages active interaction between users. The value of the YouTube platform depends not only on the content provided but also its ability to foster interaction between its users. The role of content creators seeking to draw attention towards their efforts thus needs to consider the context of the network structure that they are embedded in. We face a novel set of statistical challenges in estimating peer influence. Identification of social influence in large-scale social networks such as YouTube is difficult due to interdependent decision of users, correlations between the video’s observable and unobservable characteristics, and attributes over time. These patterns cannot be modeled with existing autocorrelation models. We design a new method – Network Auto-probit model with Fixed Effects (NAFE), to identify peer influence among YouTube users. We employ this model to examine a single network based on friendship ties between channels across time periods, implemented using Bayesian estimation method. We find that the rate of content creation is significantly positive with peer effects, suggesting that social influence significantly increases competition between content creators in an environment characterized by a deficit of attention. Implications for research and practice are also discussed.

2 - Pro-social Behavior in Mobile Networks

Jayson Jia, Assistant Professor of Marketing, University of Hong Kong, KK Leung Building Rm 717, Hong Kong, Hong Kong - PRC, jjia@hku.hk, Jianmin Jia, Xianchi Dai

We combine field experiments with wireless network data to explore the relationship between individuals’ social network histories and their actual pro-social behavior. In a phone survey and two randomized field experiments involving 10,000 subjects connected to 330,000 subscribers in a telecommunications network, in contexts ranging from donations to recycling to helping strangers, we found that higher social status in a mobile network, as inferred from connectivity asymmetry and iPhone usage, predicted lower pro-social intentions (elicited by telephone survey) and less actual pro-social behavior (measured by response to text-message help requests). We established causality in an experiment where recipients received a phone call requesting help (asking for directions) by manipulating high- versus low- class accent of caller, and showed that higher status individuals were biased against helping lower status solicitors. Our novel methodology combines new measurements of verifiable behavior, between-condition experimental manipulations, and large-scale network data to causally demonstrate that social network characteristics can predict actual pro-social behavior in numerous natural environments. Our results demonstrate the utility of combining traditional experiment design with large secondary databases in social network based field studies for causality testing and yield new insights into the foundations of social behavior in the wireless world.

3 - Determinants of Shopping Satisfaction and Repurchase Intention in E-fulfillment

Nikunj Jain, Indian Institute of Management, Indore, Rau - Pithampur Road,, Indore, 453331, India, f11nikunjk@iimidr.ac.in, Hasmukh Gajjar

This study addresses on shopping satisfaction and repurchase intention of customers in an online B2C commerce. E-tailing industry emphasized on increasing customer base by offering standardized products, product variety, product assortment, delivery quality, preferred delivery time slots, order accuracy, etc. Apart from these, liberal return and prompt exchange policies have triggered growth in online shopping. Consumers visit physical stores to get the touch and feel of the product but use online channel to get the best bargain. E-tailers offer ordering, shipping, tracking and returns/exchange information on the internet. We draw upon extant literature on E-fulfillment, electronic business quality (website ease), product quality, electronic physical distribution service quality, reverse logistics, and customer satisfaction/ repurchase intention to develop a model and set of hypotheses relating eight variables in B2C internet retail environment. Our proposed structural model may provide the mediating effect of online shopping satisfaction on online repurchase intention of the customer. The study will help managers to make choices regarding investments in service quality improvements and potential means of generating profitability. In addition, this paper may contribute to academic literature by linking operations and marketing interfaces in E-fulfillment in the context of end consumers.

■ FD06

Room E234

Social Media II

Contributed Session

Chair: Georgios Zervas, Boston University, 595 Commonwealth Ave., Boston, MA, 02215, United States of America, zg@bu.edu

1 - The Firm on Twitter: Financial Market and Social Media Reaction to Firm Social Media Participation

John Healey, University of Maryland, 3330 Van Munching Hall, College Park, MD, 20742, United States of America, jhealey@rhsmith.umd.edu, William Rand

We explore the strategic role of the firm on social media and the ability of social media communications to improve the firm’s financial standing. We place firm social media activity within the context of broader firm communication and advertising strategies and study how social media can be used to improve the firm’s financial performance and overall social media presence. Using a common exogenous event with a previously demonstrated financial outcome, the stock price target set by financial analysts, we simultaneously estimate a set of models to determine the financial and social media effects of firm-generated content. We find that unexpected levels of social media activity by the firm immediately prior to the release of a new price target are associated with an increased sensitivity of the firm stock price to financially important events. While prior research has established that advertising is used to decrease a firm’s exposure to exogenous economic changes over the long-term, social media communications can instead be used to either increase or decrease a firm’s risk exposure over the short-term. The combination of advertising and social media communications, therefore, allows the firm to better approximate an optimal risk exposure strategy. We also find that firms are, in general, not currently using social media in a manner consistent with its ability to affect firm risk exposure but are rather using it to “fill gaps” in the social media conversation with the goal of increasing online chatter.

2 - Fake it Till You Make it: Reputation, Competition, and Yelp Review Fraud

Georgios Zervas, Boston University, 595 Commonwealth Ave, Boston, MA, 02215, United States of America, zg@bu.edu, Michael Luca

Consumer reviews are now a part of everyday decision-making. Yet the credibility of reviews is fundamentally undermined when business-owners commit review fraud, either by leaving positive reviews for themselves or negative reviews for their competitors. In this paper, we investigate the extent and patterns of review fraud on the popular consumer review platform Yelp.com. Because one cannot directly observe which reviews are fake, we focus on reviews that Yelp's algorithmic indicator has identified as fraudulent. Using this proxy, we present four main findings. First, roughly 16 percent of restaurant reviews on Yelp are identified as fraudulent, and tend to be more extreme (favorable or unfavorable) than other reviews. Second, a restaurant is more likely to commit review fraud when its reputation is weak, i.e., when it has few reviews, or it has recently received bad reviews. Third, chain restaurants – which benefit less from Yelp – are also less likely to commit review fraud. Fourth, when restaurants face increased competition, they become more likely to leave unfavorable reviews for competitors. Taken in aggregate, these findings highlight the extent of review fraud and suggest that a business's decision to commit review fraud responds to competition and reputation incentives rather than simply the restaurant's ethics. Part of this work was completed while the author was supported by a Simons Foundation Postdoctoral Fellowship.

3 - Positive Brand Inferences from Processing Disfluency

Hae Joo Kim, Wilfrid Laurier University, 75 University Ave. W., Waterloo, Canada, hkim@wlu.ca, Melanie Dempsey

Building on recent findings that show processing disfluency can shape perceptions of psychological distance (Alter and Oppenheimer 2008; Förster 2009), the current research shows that processing disfluency can generate positive evaluations of an acronym. In two studies, we manipulate processing fluency through the pronunciation ease of a brand name. In study 1, participants are presented with a list of brand names that consist of difficult-to-pronounce acronyms and easy-to-pronounce acronyms, after which they rate their impressions of each brand on five attributes that are representative of either a close or distant relation. In study 2, participants evaluate the same brand name which is presented either with or without a pronunciation cue. They subsequently evaluate the name on four attributes that are pretested as being characteristic of close or distant relations. Across both studies, we find that difficult-to-pronounce acronyms create a perception that the brand is distant and that the brand is more likely to carry attributes that are consistent with a distant relation. Contrary to traditional findings in the fluency literature, these results suggest that disfluency can lead to positive brand inferences. The findings of this research indicate that the type of inferences consumers make about a brand can depend on the fluency of its name; whereas personality traits such as competence can be evoked from disfluent brand names, personality traits such as sincerity are likely to be inferred from fluent brand names. In this regard, the research has practical implications for organizations with respect to their branding and positioning strategies.

■ FD07

Room E238

Consumer Behavior

Contributed Session

Chair: Hae Joo Kim, Wilfrid Laurier University, 75 University Ave. Waterloo, Canada, hkim@wlu.ca

1 - Financially Constrained: When You Feel Stuck with Your Debt, Just Budge It

Russel Nelson, Doctoral Candidate, University of California, Irvine, Paul Merage School of Business, Irvine, CA, 92697, United States of America, rpnelson@uci.edu, Stephanie Dellande, Mary Celsi, Mary Gilly

How do financial constraints affect debt repayment behavior? Well-known personal finance experts such as Suze Orman and Dave Ramsey instruct debtors to cut up their credit cards but does restricting borrowing actually improve the likelihood of debt repayment? When a consumer who has credit card debt receives income, they face a tradeoff between the immediate reward of spending the money versus the delayed reward of paying off debt. Continuing to borrow allows consumers to prioritize immediate rewards over delayed rewards. We propose that taking away the ability to borrow leads to improved focus on the goal of debt repayment and that this effect is greater for consumers under higher levels of financial constraint (or with less discretionary income). Using a unique longitudinal dataset consisting of a sample of 10,755 clients of a non-profit debt management program (DMP), we find that 1) higher levels of financial constraint are predictive of meeting short-term financial goals and 2) higher levels of financial constraint leads to an increased likelihood of successfully completing the multi-year DMP and meeting the long-term goal of repaying debt. These findings suggest that, paradoxically, consumers with less money are more likely to repay their debts.

2 - Rumor Sharing Behavior in the Marketplace: A Study on Motivations

Subin Sudhir, Doctoral Candidate, Indian Institute of Management Kozhikode, IIMK Campus PO, Kunnamangalam, Calicut, 673570, India, subins04fpm@iimk.ac.in, Anandakuttan B Unnithan

This study looks at the motivations of consumers to share Rumors about products, services, brands or organisations. Four motivations were identified from literature; these included (i) Relationship Management, (ii) Anxiety Management, (iii) Information Sharing and (iv) Self Enhancement. The First part of the study develops scales to measure these four motivations. The second part of the study uses a quasi-experiment to understand the relationship of each of these motivations to the consumer's Intention to share the Rumor.

■ FD08

Room E304

Advertising Effectiveness

Contributed Session

Chair: Courtney Paulson, University of Southern California, Leventhal School of Accounting, 3660 Trousdale Parkway, Los Angeles, CA, 90042, United States of America, Courtney.Paulson.2016@marshall.usc.edu

1 - The Dynamic Effectiveness of Pre-launch Advertising: An Empirical Analysis using Online Search Volume

Ho Kim, Assistant Professor of Marketing, Azusa Pacific University, School of Business and Management, 901 E. Alosta Ave., Azusa, CA, 91702, United States of America, hkim@apu.edu, Norris Bruce

Advertising often plays its most influential role in the pre-release phase of experiential goods; for once consumers experience these items, the influence of advertising on their beliefs may quickly diminish. It is thus crucial to quantify ad effectiveness over this period to help improve ad copy and media schedules. The problem has been, however, that during pre-release there is generally no contemporaneous market response to advertising. Thus, we offer an alternate approach; one that uses online keyword search volume to help quantify ad effectiveness for an experience good during its pre-launch period. Specifically, we propose a state-space Tobit model in which dynamic ad effectiveness and consumer willingness-to-search each motivates pre-launch search activity. We then apply the model to the pre-theatrical phase of US motion pictures and estimate its parameters using Kalman Filtering/Smoothing and MCMC ideas. We find, for example, that wearout, forgetting, and the timing of pre-launch ads all affect online search activity, but these effects vary considerably across movies. Consequently, we find that copy wearout occurs slower, but repetition wearout and forgetting occur faster for sequels than they occur for originals. Lastly, we consider the implications of our findings on pre-release media schedules in the movie industry.

2 - Examining IMC Measures in a B2B Market in Developing Countries

Chiu-chu Su, Graduate Student, National Chung Hsing University, No. 427, Xihu Rd., Dali Dist., Taichung City, 412, Taiwan - ROC, scharlen@ms27.hinet.net, Jiana-Fu Wang, Ming-Chih Tsai

Driven largely by both intensive competition and rapid technology development, integrating marketing communications (IMC) covers a growing range of measures and is becoming inevitable for business to seek potential customers. Nonetheless, empirical evidence with regard to how customer response to the evolving IMC measures is still lacking and IMC decision thus becomes disoriented. The situation is in particular challenging in the B2B context where the resource-sparse SMEs seek far-reaching global buyers in developing countries. Even though the global manufacturing sites have largely shifted to developing countries, the purchasing behavior of manufacturer customers in the regions has still received little attentions. Therefore, this study aims at conducting a case study to evaluate IMC measures in a B2B market in developing countries. In the case study, twelve IMC measures, categorized into advertisement, sale activity, e-marketing, and worth-of-mouth, being actively practiced by a Taiwanese shoe-making equipment seller, are identified for analysis. On the other hand, behaviors of 215 shoe-making manufacturer customers from the developing countries of three continents, including Asia, Africa and Central/South America, are surveyed. In data analysis, factor analysis is applied to regroup the IMC measures with similar effects, followed by clustering analysis to categorize the customers with similar IMC perceptions, and MANOVA to identify the customers. The case study contributes to IMC literatures where few prior studies have systematically evaluated the IMC measures in a B2B context, particularly in developing countries. Empirical evidence may help IMC industry with future marketing practices in these emerging markets.

3 - Optimal Internet Media Selection using General Loss Functions

Courtney Paulson, University of Southern California, Leventhal School of Accounting, 3660 Trousdale Parkway, Los Angeles, CA, 90042, United States of America, Courtney.Paulson.2016@marshall.usc.edu, Lan Luo, Gareth James

Current methods for optimizing advertising budgets rely heavily on identifying a particular subset of advertising opportunities. For traditional print advertising, examining all possible subsets is feasible. However, Internet advertising is becoming more and more important as compared to traditional print advertising in today's digital world. More importantly, the set of Internet advertising opportunities is limited only by the sheer number of websites. Even further, advertisers must contend with websites which often vary significantly by site traffic and advertising costs, as well as correlations in site visits. To address such challenges, we formulate a procedure for automatic subset and budget optimization over a very large set of Internet websites. Due to the unique nature of this problem, we optimize over a general loss function rather than a standard squared-error loss, since this general loss function is much more versatile. We develop an efficient algorithm for computing our optimization over a grid of tuning parameters. Furthermore, while existing methods can only handle optimal Internet media selection of up to 10 websites (e.g., Danaher 2007, 2010), we propose a new approach that works well in high-dimensional problems. We also demonstrate this increased dimensionality does not diminish the efficiency of the algorithm. Our preliminary results suggest that, with a smaller number of websites, our method performs similarly to existing methods. At the same time, while existing methods cannot handle budget allocation beyond approximately 10 websites, the proposed method can handle budget allocation across a very large number (e.g. 500) of websites.

■ FD09

Room E301

Search Advertising

Contributed Session

Chair: Prabirendra Chatterjee, Assistant Professor, Sabanci University, Orta Mahalle, Universite Caddesi No: 27, Istanbul, 34956, Turkey, prabirendra@sabanciuniv.edu

1 - Optimal Bidding Strategies in the Sponsored Search Advertising Auctions

Prabirendra Chatterjee, Assistant Professor, Sabanci University, Orta Mahalle, Universite Caddesi No: 27, Istanbul, 34956, Turkey, prabirendra@sabanciuniv.edu

We model an incomplete information generalized second price auction for keyword search to analyze the optimal bidding strategies of the participating advertisers. The results also apply to a more general setting where goods are being auctioned off at multiple positions. We characterize all possible pure strategy Bayes-Nash equilibrium in a static GSP auction and show that the consideration of the click through rates ratio plays a key role in determining the equilibrium bidding strategies for the advertisers. Specifically, we find that when the click through rates ratio exceeds a critical value, there will be no pure strategy Bayes-Nash equilibrium. The results from dynamic GSP auction confirm that the existence of both separating strategy and pooling strategy equilibrium also depend on critical values of click through rates ratio such that the dominant bidding strategies in standard dynamic auction become irrelevant in dynamic GSP auctions. Lastly, we find that when search engines do not publish the bidding history (i.e. there is 'minimum disclosure of information'), the advertisers will never try to mimic each other or in other words, there will be no pooling strategy equilibrium.

2 - Examining the Impact of Contextual Ambiguity on Search Advertising Keyword Performance

Jing Gong, PhD Student, Carnegie Mellon University, 4800 Forbes Avenue, Room 3005, Pittsburgh, PA, 15213, United States of America, jingg@andrew.cmu.edu, Vibhanshu Abhishek, Beibei Li

In this paper, we explore how the contextual ambiguity of a search can affect keyword performance. The context of consumer search is often unobserved and the prediction of it can be nontrivial. Consumer search contexts may vary even when consumers are searching for the same keyword. Due to the ambiguity of a keyword, a large portion of the ads displayed may fall outside a particular consumer's interest, potentially leading to low click-through rates (CTR) on search engines. In our study, we propose an automatic way of examining keyword contextual ambiguity based on topic models from machine learning and computational linguistics. We quantify the effect of contextual ambiguity on keyword click-through performance using a Hierarchical Bayesian model that allows for topic-specific effect and nonlinear position effect. We validate our study using a novel dataset from a major search engine that contains information on consumer click activities for 12,790 distinct keywords across multiple categories from over 4.6 million impressions. We find that consumer click behaviors vary significant across keywords, and such variation is significantly affected by keyword category and the contextual ambiguity of the keywords. Specifically, higher contextual ambiguity seems to lead to a higher CTR on top-positioned ads, but the CTR tends to decay faster with position. Therefore, the overall effect of contextual ambiguity on CTR varies across positions. Our study has the potential to help advertisers design keywords portfolio and bidding strategy by extracting contextual ambiguity and other semantic characteristics of keywords based on large-scale analytics from unstructured data. It can also help search engines improve the quality of displayed ads in response to a consumer search query.

■ FD10

Room E331

Channels and Competition

Contributed Session

Chair: Fan Zhang, Washington University in St. Louis, One Brookings Dr., Campus Box 1133, Saint Louis, MO, 63105, United States of America, fanzhang@go.wustl.edu

1 - Reference Quality-based Competitive Market Structure for Innovation Driven Markets

Wonjoon Kim, Associate Professor, KAIST, 291 Daehak-ro, Yuseong-gu, Daejeon, Korea, Republic of, wonjoon.kim@kaist.edu, Minki Kim

Innovation-driven durable goods markets see substantial changes in quality and available choice sets over time and, correspondingly, changes of the reference quality in the market. However, empirical research on reference formation in consumer behavior has typically centered on prices and the reference quality concept has not y t been extended to product innovation. Therefore, this paper proposes a reference-dependent choice model for product quality that captures the attribute level competitive market structure in product innovation. The asymmetric effect of reference quality, which is based on the loss aversion behavior of the consumer, enables us to demonstrate the effectiveness of the proposed model in developing attribute-specific product innovation strategies in the U.S. wireless phone market.

2 - Cognitive Dissonance and Selling Strategy

Huihui Wang, Duke University, 100 Fuqua Drive, Durham, NC, 27708, United States of America, huihui.wang@duke.edu, Wilfred Amaldoss

Consumers experience cognitive dissonance when they hold incompatible cognitions in their minds. In this paper, we incorporate the idea of cognitive dissonance in a model of spatial competition and examine its implications for selling strategy. Prior research has shown that in the presence of demand uncertainty or information asymmetry it is more profitable for a firm to advance sell its products rather than spot sell them. We show that even in the absence of demand uncertainty and information asymmetry, advance selling is more profitable if consumers are susceptible to cognitive dissonance. Traditionally, consumers pay a lower price for product bundles. Yet the prospect of cognitive dissonance can motivate consumers to pay a higher price for a bundle than the sum of the prices of its components. Next, while psychological cost makes a product less attractive, we identify circumstances when it could improve firms' profits. Finally, we provide experimental evidence suggesting that advance selling yields more profits than spot selling if consumers are susceptible to cognitive dissonance.

3 - Customer Migration from Online Retail Platforms

Fan Zhang, Washington University in St. Louis, One Brookings Dr., Campus Box 1133, Saint Louis, MO, 63105, United States of America, fanzhang@go.wustl.edu, Qin Zhang, Tat Chan

Retail platforms, particularly online retail platforms, have become an increasingly popular channel choice for many sellers. Though profit margins of selling through retail platforms are lower, sellers are benefited from selling to a large customer base. In this study, we examine a channel structure where a seller sells the same products through both a retail platform and a store owned directly by the seller. We focus on the long-term benefit that the partnership with the retail platform can bring to the seller by migrating customers from the retail platform to the seller's store. We study two main factors that affect the customer migration – the customer awareness and the attractiveness of the seller's store. We first propose a simultaneous model of customers' channel choice and expenditure decisions, in which customers' consideration sets are determined by their awareness of the seller's store. We apply our model to a data set of panel purchases from a start-up online retailer of high-end fruit products in Shanghai, China, who also sells its products at a locally well-known online retail platform. Our results show that the seller effectively increases customers' awareness of its online store through purchasing at the retail platform. The customer awareness is also affected by word-of-mouth among neighbors. We run simulations to show how the seller can use non-pricing strategies such as product assortments to improve the profit for the retail platform as well as for itself, creating a "win-win" situation. Finally, we demonstrate how the value of the partnership varies by customer awareness and intrinsic attractiveness of the seller's store.

■ FD11

Room E334

Channels Strategy

Contributed Session

Chair: Monic Sun, Boston University, 595 Commonwealth Ave., Room 671 (6th Floor), Boston, MA, 02215, United States of America, monic@bu.edu

1 - The Impact of iPhone Exclusivity on Smartphone Demand

Daegon Cho, Assistant Professor, Pohang Science and Technology University, San 31 Hyoja-dong Nam-gu, Pohang, Korea, Republic of, dcho.postech@gmail.com, Anuj Kumar, Rahul Telang

This study investigates the impact of Apple's exclusivity arrangement with wireless carriers on the demand for smartphones. Under this arrangement, one wireless carrier in a country becomes the exclusive distributor of the iPhone for a given period of time. This restraint would lead to a bounded choice set and thus affect the smartphone choice of consumers attached to nonexclusive carriers. To measure how this limited access would change smartphone sales and consumer welfare, a structural model of consumers' demand is developed and estimated on a unique dataset comprising of a panel data of mobile handset sales in six developed countries, handset characteristics, and available applications on different mobile platforms. The model accounts for the possible endogeneity of the exclusivity duration, heterogeneous consumer tastes, and variation in iPhone availability across consumers. The parameters estimated by this model suggest that the exclusive arrangement resulted in loss in iPhone sales and an overall loss in smartphone sales in the six countries. Moreover, the restricted iPhone availability also led to a substantial loss in consumer welfare.

2 - When Should A Manufacturer Disclose Product Match Information?

Monic Sun, Boston University, 595 Commonwealth Ave., Room 671 (6th Floor), Boston, MA, 02215, United States of America, monic@bu.edu, Rajeev Tyagi

We study the impact of a distribution channel on a manufacturer's incentive to disclose information that would help consumers learn their match with her product. We find that the manufacturer tends to use nondisclosure as a competitive tool against the retailer: as nondisclosure makes demand more elastic and hence reducing the retail margin. When there is strong competition between retailers, however, the manufacturer is more likely to choose disclosure when she sells through retailers than when she sells directly to consumers. When retailers, instead of the manufacturer, are making disclosure decisions, they choose nondisclosure if and only if the product's quality is in a middle range. Mandatory disclosure regulations and voluntary information sharing among consumers may hurt the manufacturer and retailers.

■ FD12

Room W300

Pricing II

Contributed Session

Chair: Baojun Jiang, Washington University in St. Louis, 1 Brookings Drive, St. Louis, MO, United States of America, baojunjiang@wustl.edu

1 - Bundling in Product Lines

Steven Shugan, McKethan-Matherly Professor, University of Florida, 1405 W University Avenue, Room 219, Gainesville, FL, 32611, United States of America, steven.shugan@warrington.ufl.edu, Nanda Kumar

Many industries (transportation, cruises, shipping, dining) have vertical product lines. For example, Marriott International manages super-luxury (Ritz-Carlton) and economy hotels (Fairfield Inn). Moreover, firms often bundle core services with ancillary services (hotels bundle parking, breakfast, premium cable channels). Sometimes firms only bundle at the high-end of the line. For example, airlines bundle baggage handling, priority boarding with first class. However, lodging services only bundle ancillary services (internet, parking, breakfast) at low-end hotels even though both industries have similar cost (high fixed) and demand (business/leisure travelers) structures. We show that lines with little differentiation in core quality should bundle high-end, but highly differentiated lines should bundle low-end. Highly differentiated lines discriminate between consumers based on their willingness to pay (WTP) for core services while lines with low-levels discriminate on consumer WTP for ancillary services. Unbundling occurs at different ends because, as core differentiation increases, only high-end profit margins increase making high-end bundling less profitable because it loses profitable consumers that do not want ancillary services. With minimal differentiation, line cannibalization lessens high-end profit margins. High-end bundling is often more profitable because it increases line-differentiation, increases high-end margins and provides an unbundled option for consumers who do not want ancillary services.

2 - Collaborative Consumption, Firm Responses, Profits, and Consumer Surplus

Baojun Jiang, Washington University in St. Louis, 1 Brookings Drive, St. Louis, MO, United States of America, baojunjiang@wustl.edu, Lin Tian

Product sharing among consumers has recently emerged as a major trend as consumers are financially squeezed during the global economic recession and as global concerns on consumption sustainability brings society to explore more efficient use of resources and products. We develop an analytical framework to examine the effects of consumers' collaborative consumption on a firm's pricing and quality decisions. In our model, the firm sells a durable product to consumers, who may derive use values that differ across multiple usage periods. In a period with low own use value, a consumer may rent out her purchased product in the product sharing market. Our analysis shows that the firm's cost and the consumer's transaction cost for product sharing critically influence the firm's optimal strategies and the market outcome. The impact of collaborative consumption on firm profits, consumer surplus, and social welfare may be non-monotonic in the transaction cost. If the firm strategically changes both its quality and price, the potential positive effect of collaborative consumption on consumer surplus disappears and the firm will always benefit from forward-looking consumers' collaborative consumption.

■ FD13

Room W330

Retailing II

Contributed Session

Chair: Arjen van Lin, Assistant Professor of Marketing, VU University Amsterdam, De Boelelaan 1105, Amsterdam, 1081 HV, Netherlands, a.van.lin@vu.nl

1 - Advance Selling and Product Quality in a Narasimhan Duopolistic Industry

Shan-Yu Chou, Professor of Marketing, National Taiwan University, 1 Section 4 Roosevelt Rd, Taipie, 106, Taiwan - ROC, chousy@ntu.edu.tw

This paper intends to explore how advance selling may alter the pricing behavior and choices of product quality in a Narasimhan duopoly. It considers two firms that must first design their own products and then make advertising decisions before competing in price in an advance period and a subsequent spot period. There are three segments of consumers, the {\em core-value seekers}, who regard the two firms' products as perfect substitutes and are only willing to pay for a product's core value, and the {\em loyal customers} of each of the two firms, who are interested in only one firm's product and are willing to pay more when that product's quality gets higher. A firm can produce either a high-end or a low-end item. While all consumers are aware of both firms' products in the spot period, they are unaware of these products in the advance period, but a firm can use targeted advertising media to inform any particular segment of consumers in the advance period. We show that, as long as advertising is not too costly, (i) in equilibrium there must exist exactly one firm that practices advance selling and when it does, advance selling tends to reduce the frequency of price dealing in the spot period and is Pareto-improving to the two firms; (ii) with advance selling, core-value seekers are served in the advance period and loyals are served in the spot period, and the equilibrium product prices increase over time; and (iii) advance selling promotes the likelihood that firms may choose to offer products of the same quality.

2 - Hello Jumbo! The Spatio-temporal Roll-out and Consumer Adoption of a New Chain

Arjen van Lin, Assistant Professor of Marketing, VU University Amsterdam, De Boelelaan 1105, Amsterdam, 1081 HV, Netherlands, a.van.lin@vu.nl, Els Gijsbrechts

This paper explores the dynamics of consumer reactions to the roll-out of a new chain after a large-scale acquisition. In particular, the authors study how the geo-temporal pattern of store conversion from the old to the new banner, affects consumers' store choice process and, hence, the performance of the acquiring firm. The proposed model links store patronage to changing value assessments of the old banner on the one hand, and consumer learning about the new banner (through neighborhood effects and actual visits) on the other. The empirical application considers the national roll-out of an EDLP player after its acquisition of a leading HiLo chain. The refit program took two years, and openings were supported by TV and POP advertising under the theme "Hello Jumbo!". In a number of counterfactuals, the authors examine how alternative roll-outs across different markets impact traffic to the acquiring firm, thereby providing guidelines for retailers in selecting a successful roll-out strategy. The findings show that (i) the order of outlet conversion is important, (ii) long integration jeopardizes the value offer and traffic of the old banner, (iii) neighborhood effects impact traffic to the new banner substantially, and (iv) the magnitude of these effects depends on local market characteristics.

■ FD14

Room W100

Advances in Choice Modeling

Contributed Session

Chair: Vineet Kumar, Assistant Professor, Harvard Business School, Soldiers Field, Boston, MA, 02138, United States of America, vkumar@hbs.edu

1 - The Impact of Switching Stores on State Dependence in Brand Choice

Raphael Thomadsen, Washington University, 1 Brookings Dr., Simon Hall, Rm 272, CB 1133, St. Louis, MO, 63130, United States of America, thomadsen@wustl.edu

This paper examines the relationship between store switching and state dependence in consumer brand choice. The classic structural state dependence literature models inertia in brand choice by assuming that consumers experience an extra boost in utility from consuming the products they last purchased. We demonstrate that the level of inertia depends on the context in which the purchase was made, which suggests that a richer decision process is driving the state dependence. Specifically, we find that consumers exhibit more state dependence if they shop at the same store that they previously patronized as compared to if they switch to a different store. This result replicates across 18 consumer packaged goods (CPG) supermarket categories. We find that the median consumer's increased state dependence from shopping at the same store vs. a different store translates into an additional 33¢ premium (or 12% of the average price) per purchase. When consumers switch back to a store they previously visited, both the brand purchased on the last shopping occasion (at the different store) and the brand purchased the last time the consumer was at the same store influence the consumer's decisions, but the consumer is more influenced by the last purchase they made at the particular store they are currently patronizing. We also find consumer responsiveness to other elements of the marketing mix depend on which store the consumer shops at: If the consumer changes stores, they exhibit greater sensitivity to price and feature advertising. However, store switching has no consistent influence on the impact of in-store displays on consumer choice. We conclude by discussing possible theories behind the results.

2 - A Linear Approach to Estimating Dynamic Discrete Choice Models

Vineet Kumar, Assistant Professor, Harvard Business School, Soldiers Field, Boston, MA, 02138, United States of America, vkumar@hbs.edu, Tim Derdenger

We present a methodology to linearize the modeling and estimation of dynamic discrete choice models with aggregate data; this allows estimation with essentially a simple linear regression. We build upon the literature on estimating differentiated product demand models with aggregate data, as well as advances in dynamic single-agent models with conditional choice probabilities, allowing generalized extreme value error distribution to account for correlation among choices. We demonstrate that the approach performs well in terms of both computational time and accuracy of the estimated parameters via Monte Carlo simulations, and compares favorably with the current state-of-the-art methods. We illustrate an empirical application to assess the impact of multichannel product strategy in the hybrid golf club market. Using monthly sales data from 2005 through 2008 for two different retail channels, on-course and off-course, we are able to assess how a firm should coordinate products and prices across channels. Lastly, using monthly product availability data we estimate and recover a reduced form measure of consumer search costs.

■ FD15

Room W130

Choice Models II

Contributed Session

Chair: Sunghwan Yi, Associate Professor, University of Guelph, Department of Marketing and Consumer St, College of Business and Economics, Guelph, ON, N1G2W1, Canada, syi@uoguelph.ca

1 - Demand for Variety under Costly Consumer Search: A Multiple-discrete/continuous Approach

William Allender, Assistant Professor of Marketing, McMaster University, DeGroote School of Business, 1280 Main Street West, Hamilton, ON, L8S4M4, Canada, allendw@mcmaster.ca, Sungho Park, Timothy Richards, Stephen Hamilton

We offer a structural model that recognizes consumers have to incur a cost in order to resolve product uncertainty, and that some individuals have a preference for variety that leads to the selection of more than one product. Many consumer demand situations exist in which individuals have a preference for variety that leads to multiple products being chosen in continuous quantities. Clothing, food, books, and music are but four important examples of goods that are regularly purchased several items at a time. We model the optimal consideration set formation and subsequent product selection decision while recognizing consumers have varying preferences for variety. We validate our model using a Monte Carlo experiment and apply it to ice cream purchases in which 19 options are available. The results of the Monte Carlo experiment suggest ignoring search costs and/or preference for variety will lead to biased parameter estimates, including underestimating price sensitivity. We also find a direct relationship between consumers' preference for variety and the size of the consideration set, as well as the number of products purchased. What's more, the number of products in the consideration set expands before the number of product purchased increases.

2 - Which Vegetables Would You Buy and How Many? Basket Analysis

Vinay Kanetkar, Chair and Associate Professor, University of Guelph, Department of Marketing and Consumer St., College of Business and Economics, Guelph, ON, N1G2W1, Canada, vkanetka@uoguelph.ca, Sunghwan Yi

As consumers are more concerned about the health and environmental aspects of (not) eating fruits and vegetables in recent years, increasingly more research has been con- ducted in order to explore consumers preference of organic and local fruits and veg- etables. Although both the information related to production practices (e.g., organic) and production locations (e.g., local vs. imported) may increase price premium some consumers are willing to pay, they appear to be nonetheless distinctly valued by con- sumers. For example, in two discrete choice experiments involving tomatoes and apples, Onozaka and McFadden (2011) found that locally grown was valued higher than organic by consumers, and its value was augmented with fair trade certification. Furthermore, it was found that the organic certification mitigated the negative valuation for imported vegetables. Similar findings were reported by Ekelend, Fernqvist and Tjarnemo (2007), whose conjoint analysis showed that that Swedish respondents ranked production origin (i.e., produced in Sweden vs. imports) higher than production method (e.g., organic vs. conventional) in the case of carrots and tomatoes. Although these findings shed light on consumers' valuation of local and organic labels in the produce domain, it is not certain to what extent consumers' choice from one category at a time may extend to the real produce shopping context. Since consumers rarely purchase one type of vegetable at a time, it is worth investigating consumers' valuation of local and organic labels may vary across multiple types of vegetables that are considered for purchase at the same time. Furthermore, given a budget constraint, local and organic label may interact with the type of vegetables liked or disliked by a consumer. For example, as much as a consumer prefers local produce, she may skip local broccoli to compensate for expensive local asparagus, which is her favorite vegetable in spring season. Another consumer may buy inexpensive imported asparagus and broccoli because they are consumed together at home. Still another consumer may totally skip asparagus and buy inexpensive tomatoes and potatoes since he does not like asparagus or since he wants the biggest bang out of his budget. In order to consider cross-category dependence across different vegetables, it is necessary to analyze what vegetables are put (and are not put) in a consumer's shopping basket. In the next section, we provide a brief review of market basket analysis literature, and explain how basket analysis can be applied to the analysis of choice of vegetables.

Saturday, 8:30am - 10:00am

■ SA01

Room E130 (Aud.)

Social Influence & Networks

Contributed Session

Chair: Pinar Yildirim, Assistant Professor of Marketing, University of Pennsylvania, The Wharton School, Philadelphia, PA, United States of America, pyild@wharton.upenn.edu

1 - The Economics of Assertive Persuasion

Luc Wathieu, Professor, Georgetown University McDonough School of Business, 36th and O Streets NW, Washington, DC, 20057, United States of America, lw324@georgetown.edu, Ann Kronrod, Amir Grinstein

Consider a consumer who needs to choose between two actions, and decision-making is costly. It would be economical for the consumer to follow a well-targeted advice and save the decision cost. Imagine a world where communicators attach a probability of relevance to their advice, e.g., “there is an A% chance that you should pick X.” We call A the degree of advice assertiveness. In a cooperative environment, persuasion occurs when assertiveness is high enough to dissuade consumers to spend the cost of making an autonomous decision. We first remark that high assertiveness is required for persuasion in high-stake decision domains, in low decision cost domains, and when the consumer’s prior is biased against the advice. In non-cooperative contexts, communicators will be tempted to distort assertiveness to signal their ability to give targeted advice, or to help consumers to re-consider the stakes at hand.

2 - The Effect of Customers’ Social Media Participation on Business Value: Evidence from a Field Study

Ramkumar Janakiraman, Texas A&M University, 4112 TAMU, College Station, TX, 77845, United States of America, ram@mays.tamu.edu, Ram Bezawada, Rishika Ramkumar, Ashish Kumar

The objective of this paper is to systematically examine the benefits that accrue to firms because of customers’ participation in firm initiated social media efforts. For this purpose, we focus on a key metric, customer-firm relationship duration, and utilize a unique panel dataset comprising of social media participation and actual purchase behavior of the same set of customers at the individual level. We also hypothesize and test for the role of customer-firm offline exchange relationship on the effect of social media participation on customer tenure. We assemble a novel data set in which we not only track individual purchases but also observe customer participation activities on a firm’s social media page. To account for salient endogeneity issues arising due to self-selection, we rely on a quasi-experimental design wherein we compare the behavior of two distinct groups: (1) the “treatment” group comprising of customers who participate in the firm initiated social media site, and whose behaviors we wish to analyze, and (2) a “control” group, consisting of those customers who are not part of /never participate in the firm’s social media site. Our study joins a limited set of studies that attempt to uncover the direct benefits that accrue to firms as a consequence of their social media efforts. Our approach is different from the extant social media research in that we use actual behavioral data to establish the causal link between customers’ social media participation and their relationship tenure with the firm. Our study is also the first to extend theories concerning customer-firm interactions to the social media domain and to examine how they impact a key driver of firm value – customer lifetime duration.

3 - An Empirical Investigation of Online Information Sharing Behaviors: Evidence from a Daily Deal Platform

Tianshu Sun, University of Maryland, Robert Smith School of Business, 3330 Van Munching Hall, College Park, MD, 20770, United States of America, tianshusun@rhsmith.umd.edu, Siva Viswanathan, Elena Zheleva

With the rapid rise of the “sharing economy” there has been a renewed interest in understanding the antecedents and consequences of sharing behaviors. While there is a diverse body of research on information sharing across fields such as marketing, psychology, and information system (Berger 2013, Aral et.al. 2011), a number of key questions remain unanswered. In this study, we seek to identify the primary motivations behind information sharing as well as the impact of information customization on the effectiveness of information sharing. Using an extensive and unique individual level dataset from a leading daily deal platform on customer sharing deals with each other over time, we are able to understand the motivation and effectiveness of information sharing at granular level. Specifically, we examine the role of reciprocity and monetary incentive in sharing, as well as their revenue implications for the platform. We also report on a randomized field experiment designed to evaluate the impact of sharing message customization on recipient’s purchase decision. The results from our study shed light on how firms can encourage information sharing and enhance its effectiveness. Specifically, we will discuss several potential strategies and tactics firms can take (e.g. sharing incentive program, sharing message customization) to improve the volume and effectiveness of information sharing.

4 - The Impact of Network Based Measures on Financing Equality

Pinar Yildirim, Assistant Professor of Marketing, University of Pennsylvania, The Wharton School, Philadelphia, PA, United States of America, pyild@wharton.upenn.edu, Yanhao Wei, Chris Dellarocas, Christophe Van den Bulte

Motivated by the growing popularity of social data use in credit scoring industry, this study aims to understand the impact of using network-based measures on financing equality. We build a model to assess the accuracy of credit scores obtained from individualized data vs. data from an individual’s network. Next, considering the possibility of consumer reaction to the use of such measures, we investigate how this accuracy is influenced if individuals can modify and form their social networks to attain higher credit scores. We find that if the individuals are motivated to improve their financial scores, they may form smaller social circles with tighter relationships. The impact of this modification on consumer scores, however, is ambiguous. We show that it is possible for credit scores to be more accurate in the long term as a result of the modifications in social networks, however, this accuracy may come at the cost of more fragmented social relationships. Finally, we extend our discussion to market implications of trading social network data.

■ SA02

Room E208

B2B Networks, Alliances, and Collabration I

Contributed Session

Chair: Lourdes Perez, Marketing Professor, Toulouse University, Business School, Trafalgar 10, Barcelona, Spain, l.perez@tbs-education.es

1 - The Network Value of Marketing Alliances Under Firm-specific Uncertainty

Jameson Watts, University of Arizona, 5051 N Sabino Canyon Road, Unit 1160, Tucson, AZ, 85750, United States of America, jamesonw@email.arizona.edu

Despite more than twenty years of research, the value of marketing activity in technology-intensive (TI) industries remains a contentious topic. Discussion of this issue is particularly robust in the context of marketing alliances. While some scholars debate the intrinsic value of marketing alliances, others highlight their role in shaping the competitive landscape. This article contributes to this line of research by studying marketing alliances in their broader network setting. Specifically, the authors investigate how network position affects market performance for firms experiencing different levels of uncertainty. Results show that increases in network centrality can improve market performance when uncertainty about a firm is low. However, increases in centrality hurt performance when uncertainty is high. Equivalently, the value of a static network position may rise and fall with changes in a firm’s uncertainty.

2 - The Effects of New Product Development (NPD) with Emerging Market Partner Firms on Shareholder Value

Nicole Hanson, Doctoral Student, Texas A&M University, 215G Wehner Building, 4112 TAMU, College Station, TX, 77843, United States of America, nhanson@mays.tamu.edu, Venkatesh Shankar

In recent years, global firms, such as Adobe Systems, Pfizer, Verizon Communications, and Proctor & Gamble, have been increasingly looking to large emerging markets, such as India and China, to develop their innovation architecture (the portfolio and structure of innovations). Emerging markets are attractive because of a highly specialized and trained R&D workforce, low operating costs, and a large and underutilized customer base. One way for firms to enter emerging markets is to undertake new product development (NPD) through a firm in an emerging market (e.g., collaborate with an emerging market firm on a new product, acquire an emerging market firm’s development team). However, little is known about the effectiveness of NPD undertaken through an emerging market firm. What are the short-term effects on shareholder value and firm risk of such NPD in emerging markets? What are the determinants of these effects? We develop a conceptual framework and hypotheses related to these important questions and test them using a uniquely compiled dataset of 148 publically traded North American-headquartered global companies who utilized Indian partners for NPD during 1990-2013. Our analysis reveals important effects. Past profit has a negative effect on shareholder value and highlighting the quality of local employees in the announcement exacerbates this effect. However, development of goods (vis-à-vis services) ameliorates this negative effect. Furthermore, having a cost saving orientation leads to positive abnormal returns, but this effect is lower for more experienced, B2C (vis-à-vis B2B), or more diversified firms. With regard to firm risk, predominantly goods firms have lower levels of systematic and idiosyncratic risk than predominantly service firms. We discuss the significant theoretical and managerial implications of these findings.

3 - Should Strategic Decisions be Assessed using Short - or Long-term Stock Returns?

Nukhet Harmancioglu, Assistant Professor, Koc University, Rumelifeneri yolu, Istanbul, 34450, Turkey, nharmancioglu@ku.edu.tr, David Griffith

The marketing literature is replete with work assessing firm market value of marketing actions via the analysis of short-term stock returns. However, researchers are increasingly questioning the validity of this assessment approach, most notably related to strategic decisions which have long-term effects. In this work, we build a theoretical model wherein asset-related factors and uncertainty are modeled as antecedents to abnormal returns. The results from an assessment of 125 offshore innovation outsourcing alliance announcements indicate that abnormal stock returns in the long-term are consistent with theoretical predictions, while short-term results are not. To further validate our contention, we also assessed a tactical decision (i.e., contract manufacturing). The results demonstrate that short-term results are consistent with expected prediction for the tactical decision. The findings illustrate that stock returns related to strategic marketing decisions, such as offshore innovation outsourcing alliances, should be assessed using long-term stock returns.

4 - Value Generation in SMEs: An Integrative Approach

Lourdes Perez, Marketing Professor, Toulouse University, Business School, Trafalgar 10, Barcelona, Spain, l.perez@tbs-education.es

Small and medium-sized enterprises (SMEs) have been somewhat overlooked in the literature, despite being the most common company size and also making significant contributions to employment, GDP and innovation. Many of these innovations are the result of collaborations with large partners who have complementary resources and capabilities. Therefore, in order to create value, ambitious and growth-oriented SME's must learn to compete and collaborate with partners who have more resources, power and wider social networks. In marketing, the analysis of value creation may adopt a service view, based on Vargo and Lusch's (2004) seminal work. Guided by these ideas, we adopted an integrative and multidisciplinary approach to respond to recent calls for more integrative approaches to understanding collaborative buyer-seller relationships. This paper examines the significant business relationships and networks of 15 SMEs, focusing particularly on the differences between these asymmetric relationships and those between large partners. We highlight the important role played by committed champions in developing communication and trust, given that SMEs do not have easy access to top managers in large corporations. Based on the current emphasis on value-in-use, our empirical study further sheds light on the process of reciprocal value creation and value sharing. We develop a novel concept; dual-value appropriation, where in contrast with current understandings, partners do not split total value generated. Instead, they fully appropriate the total value, as it represents a different value proposition for each partner.

■ SA03

Room E204

Branding & Private Labels

Contributed Session

Chair: Rita Coelho do Vale, Assistant Professor, Catolica Lisbon- School of Business and Economics, Palma de Cima, Lisboa, 1649-023, Portugal, ritavale@ucp.pt

1 - The Impact of Brand Competition on Whether, When, and How Much to Buy

Anthony Koschmann, PhD student, Emory University, 1300 Clifton Road, Atlanta, GA, 30032, United States of America, akoschm@emory.edu, Doug Bowman

Common objectives of marketing managers seeking to increase demand include how to sell their products to more consumers, how to get consumers to buy more often, and how to get consumers to buy more during a shopping trip. Competition exerts a profound influence on these objectives. In this study, we develop and empirically test a theoretical framework that describes how changes over time in both the competitive context within a category and the macro context of the marketplace affect consumer demand. We study household penetration rate, time between purchase occasions, and the volume purchased per occasion for grocery products. Our theory is based on the notion that choices made by consumers are driven by three forces within a category: brand competition, macro factors (including customer demographics), and marketing intensity. These forces give rise to changes in consumption. For example, increased brand competition leads to more choices for consumers, resulting in higher household category penetration and shorter inter-purchase time. Competition also forces brands to offer more deals to entice consumer choice, resulting in increased volume purchased during a shopping trip. Categories with dominant market leaders and/or private labels with sizeable influence exhibit the opposite effect, and are associated with reduced household penetration and longer inter-purchase times.

2 - Advertising Spillovers and Consumer Demand for Private Labels

Rigoberto Lopez, Professor, University of Connecticut, 1376 Storrs Rd., W.B. Young Building 305-C, Storrs, CT, 06269, United States of America, rigoberto.lopez@uconn.edu, Yizao Liu, Chen Zhu

Private labels (PL), also known as store brands, have captured nearly a quarter of the product volume and a fifth of the dollars spent at U.S. supermarkets (Hale, 2013; Private Label Manufacturers Association, 2013) and have made inroads in other types of retail outlets in the United States and Europe (Ezrachi, 2010). Although manufacturer brands have fought the expansion of private labels through pricing, promotion, and quality, the use of paid advertising has been a strategic weapon to attempt to recapture market shares away from the competition as well as PLs. This paper examines the spillover effects of television advertising on brand-level consumer demand for carbonated soft drinks (CSDs, using a random coefficients logit model (BLP) with household purchasing and advertising viewing data from five U.S. cities. As in previous work, we find that although brand spillover effects significantly increase demand for CSDs in the same company and undermines demand facing other manufacturers' CSD brands. Surprisingly, there are positive spillover effects on the demand for private label brands. This indicates that brand advertising is persuasive with respect to manufacturers' brands but complementary with respect to private labels. Further results show that eliminating all television advertising for CSDs would lower both brand and aggregate CSD sales (including private labels) as consumers migrate to other beverages, indicating that advertising spillovers lift the demand for the entire category. These results shed new light on the nature of competition between manufacturer brands and PLs in mature markets.

3 - Does the PL Profits from Across-category Spillovers: An Evidence from Attraction Market Share Models

Mouna Sebri, PhD Student, HEC Montreal, 3000 Chemin Cote Ste Catherine, Montreal, QC, H3T 2A7, Canada, mouna.sebri@hec.ca, Georges Zaccour

The presence and strength of spillover effects is extremely important in the context of consumer decision making. Spillovers occur when information and existing perceptions influence beliefs that are not directly addressed by the original perceived. Despite the abundance of the literature dealing with spillover effects, research is lacking within a context of private labels presence. The purpose of this work is to investigate, from a retailer perspective, the existence of spillovers across categories for the PL, to understand how such competitive spillovers occur, and what some of their moderating factors might be. We seek to answer the following questions: First, does a PL performance in a given category contribute to boost its comparable in another category? Second, do consumers generalize their knowledge across PL brands by learning from their consumption of one PL brand in a specific category about the PLs in other categories? If so, to what degree? And third, is this cross-category spillover more relevant for PL brands, compared to NBs? The answers to these challenging questions are highly relevant for retailers supplying PLs in different categories, by facilitating the coordination of their marketing efforts across categories and enhancing their marketing programs effectiveness. Based on a competitive structure, our research proposes an innovative market share attraction model accounting for spillovers across categories at the brand-level. Our work provides a method to quantify the value of spillover between product categories, based on the global marketing effort, and thus the attraction which benefited each of the competing brands. And most importantly, the proposed model allows comparing the interaction dynamics across categories for both PLs and national brands.

4 - Private Labels' Market Power – An Empirical Analysis of Retailers and Category Effects

Rita Coelho do Vale, Assistant Professor, Catolica Lisbon- School of Business and Economics, Palma de Cima, Lisboa, 1649-023, Portugal, ritavale@ucp.pt, Pedro Verga Matos

In the last few years, retailers have moved away from simple manufacturers' suppliers ("selling" shelf space to producers) and manufacturers' customers (when retailers buy products to producers), but have also become its competitors, since they sell own-branded products (private-labels) which compete with manufacturers' products (NBs; Dobson 2005). PLs play a critical distinctive role among different retailers since they are exclusive and cannot be purchased elsewhere (Collins and Burt 2003). As a result, the development of PLs not only transformed the relations between manufacturers and retailers, boosting retailer's bargaining power (Ailawadi et al. 2008), but also affected competition between retailers, because PLs become an additional way of differentiation (Hoch and Banerji 1993). This research presents a new empirical framework using the relative price differential between average NBs and PLs prices as a proxy measure to explain how PLs market power varies across retailers and product categories. The proposed model allows the identification of two separate "pure" effects: (1) retailers' effect and (2) "categories" effect. To decompose individual product price's differential into retailers and categories, we run cross-sectional regressions of individual price's differential on retailers and categories' dummies (adapted from Kennedy 1986 and Suits 1984). Using primary data of a large data set (more than 4000 observations) that combines prices and market share information for NBs and PLs on 40 product categories, across 9 different retailers, during 4 years period (1st quarter 2009 to last quarter 2012), empirical findings suggest that private labels' market power is mostly influenced by categories idiosyncratic nature and not much by retailers' market power.

■ SA04

Room E201

e-Word of Mouth I

Contributed Session

Chair: Albert Valenti, PhD Candidate, Boston University School of Management, 595 Commonwealth Ave., Boston, MA, 02215, United States of America, albertv@bu.edu

1 - Product Recommendations Based on Latent Purchase Motivations

Bruno Jacobs, Erasmus School of Economics, P.O. Box 1738, H7-33, Rotterdam, 3000 DR, Netherlands, jacobs@ese.eur.nl, Dennis Fok, Bas Donkers

Good product recommendations are key to successful online retailing, they help customers find products and induce cross-selling. In practice, many recommendations are based on counting co-occurrences between (combinations of) products. In such an approach it is difficult to use the entire purchase history of a customer as a whole, due to the sparse nature of purchase data. In addition, it is hard to incorporate additional information at the customer level. Both problems may be solved with a formal model. However, many models cannot deal with the scale of a typical online retailer. Other models require a predetermined classification or coding of the assortment. Often this is suboptimal or simply not possible. We propose a model-based approach to generate recommendations that solves the aforementioned problems. Our latent motivation model (LMM) adapts the latent Dirichlet allocation (LDA) model for modeling purchase data and extends it to include customer-specific variables. The key idea behind our approach is that each purchase is driven by a latent purchase motivation, e.g. the preference for eco-friendly products. Applying our method to the data of an online retailer, we show that the identified motivations are intuitive and that our model consistently outperforms benchmark methods.

2 - The Role of E-WOM Sources on the Impact of E-WOM Presentation Order on Consumer Attitude

Siqin Liu, Zhongnan University of Economics and Law, #1 South Nanhu Road, Wuhan, Hubei, Wuhan, 430073, China, 87716371@qq.com, Hanchi Ye

Abstract: Internet, as a new channel of WOM, enables consumers to get multiply WOM messages. However, there is a very real consumer situation that consumers may receive opposite messages (positive-negative) from the same sources. According to tie strength, this paper divides e-WOM sources into strong tie sources and weak tie sources, examining how e-WOM sources moderate the influence of e-WOM presentation order on consumer attitude. The results of empirical study show that when opposite e-WOM messages from strong ties, consumers will be more influenced by the later e-WOM message. Hence, consumer attitude will be more positive in negative-positive e-WOM order than positive-negative order. However, when consumers receive opposite e-WOM messages from weak ties, consumer attitude will be more influenced by negative e-WOM instead of e-WOM presentation order. That is, no matter e-WOM presentation order maybe, it will lead to negative attitude of consumers.

3 - Service Adoption and Defection Decisions: Understanding the Effects of Social Influences in Consume

Vardit Landsman, Tel Aviv University and Erasmus University, Ramat Aviv, Tel Aviv, Israel, landsman@post.tau.ac.il, Irit Nitzan

In this paper we utilize social network data together with information regarding customers' adoption and defection decisions to analyze the social interplay between the two types of decisions. Previous literature concentrated on the effect of adoptions on the adoption decision and of defections on the defection decision, which we term within-process social effects. We offer a broader perspective to include cross-process social effects: the influence of adoptions on the defection decision and of defections on the adoption decision. We specify and estimate a multi-event hazard model for both adoption and defection and find that defections have greater social influence on customers' decisions. Specifically, when considering within process effects, we find a stronger effect of defectors on defection, as compared with adopters on adoption. Consistently, when considering cross process effects we find a stronger (negative) effect of defectors on adoption, as compared with adopters on defections. This highlights the important role of negative information in the diffusion of new products. Cross-process social effects are also stronger among neighbors who communicate with each other more frequently or who are more similar to each other in terms of their demographic characteristics.

4 - Reputation Dynamics: An Empirical Investigation of Boston Restaurants on Yelp.com

Albert Valenti, PhD Candidate, Boston University School of Management, 595 Commonwealth Ave., Boston, MA, 02215, United States of America, albertv@bu.edu, Monic Sun, Georgios Zervas, Shuba Srinivasan

This research presents an empirical investigation on the role businesses have in strategically managing their quality investments over time as result of their changing reputation. While theoretical literature (e.g., Liu 2011, Liu and Skrypacz 2013, Board and Meyer-Ter- Vehn 2013) predicts that businesses can improve their performance by optimally reallocating their quality investments as a function of their reputation, to date there has been no empirical support for this prediction. Yelp.com allows us to tackle this problem as it tracks current as well as past business reputation in the form of consumer ratings and reviews. Building on the theoretical literature, we hypothesize that businesses are less (more) likely to invest in their service quality when their reputational level is high (low). Our focus is on the restaurant market in Boston, a setting where quality investment decisions are dynamic and likely have a significant impact on the service delivered, and consequently on reputation. Also, since this setting is competitive with customers having access to detailed information, reputation likely has a critical influence on business performance. We use online reviews and ratings at Yelp.com as proxy measures of business reputation. We combine a dataset of the 264,685 reviews at Yelp.com for 3,223 restaurants in Boston between October 2004 and December 2012 with information on restaurant characteristics: prices, location, chain affiliation, type of cuisine, menu, etc.

■ SA05

Room E231

Online Pricing

Cluster: Internet and Interactive Marketing

Invited Session

Chair: S. Chan Choi, Professor, Rutgers Business School, 1 Washington Park, Newark, NJ, 07102, United States of America, chanchoi@rutgers.edu

1 - The Effect of Online Promotions on Offline Sales

Marcel Goic, Assistant Professor, University of Chile, Republica 701, Santiago, Chile, mgoic@dii.uchile.cl, Ricardo Montoya, Rodolfo Alvarez

One of the key challenges in the design of multichannel marketing plans is the ability to identify how the marketing mix in one channel affects customer behaviors in the other channels. In this project we evaluate how the promotions announced in the website affect sales in offline stores for a department store at the sku level. Among others, we characterize the impact based on the department, the size of the discount and the position of the display in the website.

2 - Time Pressure and Social Coupon Purchasing-decisions

Chinintorn Nakhata, PhD Candidate, University of South Florida, 1531 W Lemon St Apt 6211, Tampa, Fl, 33606, United States of America, cnakhata@usf.edu

While there is a growing popularity used of SCs (i.e., online coupons that offer consumers a large discount with a long redemption period when they prepay for a retailer's products/ services) featuring a low-implausible face value (i.e., a face value that is lower than the normal price range expected by consumers for a particular type of service) among service retailers, less is known about why consumers are willing to prepay for such SCs, which results in sub-optimal decision-making in terms of achieving ultimate large monetary savings. Based on mental accounting theory and literature in decision-making under time pressure, this paper investigates the roles of coupon price relative to willingness-to-prepay for an SC (WTPP-SC) and time pressure on consumers' SC purchasing-decisions. The results from an experimental study show that consumers' likelihood of purchasing SCs featuring a low-implausible value, in which a coupon price lower (higher) than WTPP-SC is greater when time pressure is present (vs. absent). Also, pain of prepayment (i.e., disutility (imputed cost), painful feeling, generated from the thought of the prepaying amount of money required (i.e., coupon price) for an SC) is an underlying process. This paper ends with theoretical and managerial contributions, and avenues for future research.

3 - From Free to Premium: An Empirical Study of Purchase Behavior in Freemium Context

Savannah Wei Shi, Assistant Professor of Marketing, Santa Clara University, 500 El Camino Real, Santa Clara, CA, 95050, United States of America, wshi@scu.edu, Mu Xia, Yun Huang

Freemium is a business model in which a free version of a product is provided in the hope that some customers will opt to purchase a premium version that offers additional features. Due to numerous freeloaders and limited conversions, many companies adopting freemium models are struggling to make a profit. The authors provide a framework to empirically investigate the driving forces behind consumers' purchase decisions in a freemium context. Using online freemium game data, the authors find that positive product experience and the trust with organization lift consumers' purchase intentions when they could use products for free. New members of a social group and consumers with lower social status within the game context exhibit higher purchase propensities than their counterparts. The number of friends a consumer has moderates the impact of product experience on spending. The results offer some managerial implications in terms of the designing and targeting strategies for the companies adopting freemium model: usage feedback, quality scores of organizations, and social environment are essential. Additionally, companies could develop customized actions based on consumers' product performance and social profiles to elicit repeated purchase in the freemium context.

4 - Free Trials in the Software Industry under Consumer Learning

S. Chan Choi, Professor, Rutgers Business School, 1 Washington Park, Newark, NJ, 07102, United States of America, chanchoi@rutgers.edu, Nancy Guo

Limited-time free trials are prevalent in the computer software industry. In this paper, we derive (a) the conditions under which these offers are profitable, and (b) the optimal duration of the free-trial period. We consider two underlying factors favoring free trials: resolving uncertainty about the performance of the product and the network externality. Pessimistic consumers who underestimate its performance can learn and update the belief over the free-trial period, at the same time increasing the size of the installed user base. On the other hand, the free versions may cannibalize the sales of the paid version. We examine how a monopolist software company can optimally determine the free-trial period as well as the price of the paid version. We show that the firm is more profitable to offer free trials when the network externality is modest and consumer's initial belief of the product quality is low. The implementation of optimal trial duration can increase the firm's profit substantially compared to the typical 30-day scenario.

■ SA06

Room E234

Social Media I

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Christine Balague, Assistant Professor, Institut Mines Télécom-Télécom School of Management, 9 Rue Charles Fourrier, Evry, 91011, France, christine.balague@it-sudparis.eu

1 - The Effects of Asymmetric Social Ties on Online Contribution Behavior

Rishika Ramkumar, Texas A&M University, 4112 TAMU, College Station, TX, 77843, United States of America, rrishika@mays.tamu.edu, Jui Ramaprasad

Using a unique disaggregate level panel dataset of users' contributions and social tie formation in an online music blog aggregator, we seek to examine the effect of social influence due to different types of ties, reciprocated, follower and followee ties?and the moderating role of network characteristics (as captured by tie strength and structural embeddedness) on users' online contribution behavior. Our econometric modeling approach accounts for various factors that can confound with social contagion and includes several robustness checks. We find a positive effect of social influence on users' contribution behavior. We find that the social influence effect is asymmetric across the different types of ties and that the effect is moderated by both tie strength and structural embeddedness among network ties. We substantiate our findings by adopting a quasi-experimental approach based on propensity score matching. We discuss the theoretical and the managerial implications of our results in the study.

2 - How Social Influence Shapes Popularity: Emotion and Opinion Formation in Online Commenting

Hsin-Hsuan Meg Lee, University of Amsterdam Business School, Plantage Muidergracht 12, Amsterdam, Netherlands, h.h.lee@uva.nl, Willemijn van Dolen

Why are some topics more widely and positively discussed than others in online communities? Based on social impact theory and attribution theory, we investigate individual commenting behaviors in online communities and their influence on popularity, with a particular focus on the effect of valence and opinions. Data from an online community show that users are influenced by both the immediately preceding comments, i.e., the immediacy of sources, and the comments of the majority, i.e., the number of sources. Individual comments tend to mimic the emotions of and express opinions similar to preceding comments. Concurrently, the popularity of topics is shaped by the content of these comments, rather than the content of the initial information alone. The results suggest that when the informative value provided by the preceding convergent discussions is enough for the users to attribute the cause of such consensus to the initial ideas and to convince subsequent users with the arguments, users are less likely to continue commenting. Consequently, discussions that are highly emotional, both negative and positive, and in agreement with each other are less likely to be popular. On the other hand, discussions that have high variance in opinions and emotions are more likely to be popular. This study suggests that, due to sequential influence, the first comments play an important role in how conversations are formed and in the resulting popularity of the online discussion.

3 - What Motivates Consumer's Misbehavior Intention? The Effect of E-WOM, OL and Machiavellianism

Yuan Yin, Zhongnan University of Economics and Law, 182# Nanhu Avenue, East Lake High-tech Development Zone, Wuhan, China, yyuan199021@163.com, Jingwen Chen

The word of mouth (WOM) and observational learning (OL), two types of social interaction, have been generally studied by previous researchers. They have significant impacts on consumers' purchase decision, while few researches pay attention to their influences on online misbehavior. In this paper, we examined the respective effect of these variables on consumers' misbehavior. Moreover, Machiavellianism (Mach) as a kind of intrinsic quality may influence on consumers' decision making, so it was introduced in this study. Using an experimental methods and analysis data from 96 students and 28 Internet users, we found that (1) the likelihood of consumer misbehavior is lower when the WOM is positive and (2) negative OL could induce other consumers to learn the misbehavior. (3)In our study, Mach has no significant effect on misbehavior, while it acts as a moderator: consumers with low Mach are more likely to be influenced by misbehaviors of others. The consequences of the study have implications for consumer policy, managers and future research.

4 - New Social Network Metrics for CRM 2.0

Christine Balague, Assistant Professor, Institut Mines Télécom-Télécom School of Management, 9 Rue Charles Fourrier, Evry, 91011, France, christine.balague@it-sudparis.eu

Social networks are mainly considered by marketers as valuable earned media on account of their potential viral audience. They also constitute a source of big data on individuals increasing marketers' knowledge on consumers or prospects. Matching social networks and transactional data, this research focuses on innovative scoring of Facebook active fans in order to implement a CRM 2.0 strategy. Our contribution consist first in developing a specific crawler with a big data infrastructure to collect automatically Facebook brand pages data, and second in scoring active Facebook active fans through algorithms developed with R. We propose several operational recommendations based on this work which also opens future researches.

■ SA08

Room E304

New Products: Diffusion

Contributed Session

Chair: Vahideh Abedi, Assistant Professor, California State University-Fullerton, Mihaylo College of Business & Economics, 800 North State College Blvd, Fullerton, CA, 92834, United States of America, vabedi@fullerton.edu

1 - Understanding Social Contagion in the Diffusion of Innovations using a Time-varying Network Model

Guillermo Armelini, Professor, ESE Business School, Av. Plaza 1905, Santiago, Chile, garmelini.ese@uandes.cl

Marketing and diffusion research contains a heated debate about how social contagion affects the diffusion of innovations. To contribute to this debate, we model and analyze the process of social contagion on weighted and time-varying network, which is built using a detailed data set that combines dynamic social relationships and adoption patterns of a new technology among a consumer community over the course of ten years. Our modeling approach assumes (1) temporal and spatial heterogeneity among customers, (2) that social network structure varies over time and (3) that an individual contact with her acquaintances depends on the exact ordering of the links. Our first results indicate that (1) pure social contagion (i.e. without the influence of external factors) is at work but it does not fully explain the rate of innovation adoption, (2) while opinion leaders accelerate the rate of social contagion among their direct links, this effect is prevalent in some regular consumers as well, and (3) there is a strong synergy between social contagion and advertising but not between the former with other external factors.

2 - Income Inequality Within and Between Countries – How it Affects the Acceptance of New Consumer Products

Christophe Van den Bulte, Professor of Marketing, University of Pennyslvania, Philadelphia, PA, 19104, United States of America, vdbulte@wharton.upenn.edu, Ashish Sood

Economists have long studied the diffusion of new production technologies like electricity, rail freight, or aviation. An important question is whether and how the acceptance of such innovations has converged or diverged between rich or poor countries. There is a substantial body of research in marketing on the acceptance of new consumer products as opposed to production technologies. Much of that work, however, focuses on within-country differences and on the shape of the diffusion curve rather than the speed at which new products reach particular levels of penetration or acceptance. This study seeks to answer the following questions regarding the speed of acceptance of new consumer products: Has there been convergence or divergence in the speed of acceptance of new consumer products between rich and poor countries? Do income level and income inequality affect the speed of acceptance within countries? Do other elements affect the within-country acceptance as well? We examine: 1) the acceptance of status differences among people in a society; 2) the female labor participation rate; and 3) the need for initial investments in infrastructure and the presence of multiple competing standards. The proposed research is important for both public policy and entrepreneurship.

3 - Technology-Push or Demand-Pull? A Supportive Policy to Maximize the Diffusion of Renewable Energy

Hossein Eslami, PhD Candidate, NUS Business School, Mochtar Riady Building, Level 8, 15 Kent Ridge Drive, Singapore, Singapore, hossein_ed@nus.edu.sg

Diffusion of renewable energy sources has become a major aspect of sustainability research. It draws on different disciplines including economics, technology management, public policy, and marketing. In this paper we aim to develop a multi-disciplinary decision support framework to help policy makers maximizing the diffusion of renewable energy sources among individuals. The focus of the model is on two general categories of policy instruments, namely technology-push (i.e. innovation) and demand-pull (i.e. subsidy). The market response to the policy instruments is modeled using the new product diffusion framework. We try to make the quantitative model parsimonious while not compromising its generalizability. The results would have important implications for the policy makers in the renewable energy field.

4 - Supporting New Product or Service Introductions: Location, Marketing, and Word of Mouth

Vahideh Abedi, Assistant Professor, California State University-Fullerton, Mihaylo College of Business & Economics, 800 North State College Blvd, Fullerton, CA, 92834, United States of America, vabedi@fullerton.edu, Oded Berman, Dmitry Krass

This research studies the mutual influence of the setup of distribution (or service) channels (called facility location decision) and advertising activities of a firm introducing a new product or service. We investigate the firm's strategy in allocation of resources between multiple advertising channels over time and the setup of multiple potential distribution (or service) channels. The aim is to maximize profit obtained from introducing the product or service to multiple markets that are distributed over a network, while demand is influenced by the word-of-mouth between customers in a diffusion of innovation framework. We provide solution methods to solve the problem and demonstrate the great benefit of such joint decision making in an illustrative case study.

■ SA09

Room E301

CRM: Loyalty Programs

Contributed Session

Chair: Yuping Liu-Thompkins, Professor of Marketing, Old Dominion University, College of Business & Public Admin., Norfolk, VA, 23529, United States of America, YXXLiu@odu.edu

1 - In-network and Out-of-network Shopping in a Loyalty Program

Nuo Xu, PhD Student, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States of America, nuo.xu@emory.edu

In addition to point-based reward program and direct marketing efforts, many loyalty programs today are built as credit cards that allow members to accelerate their progress towards a reward through purchase outside of the loyalty program network. This study looks into this particular loyalty program structure in order to understand the correlation between in-network and outof- network shopping using the loyalty program credit card and whether the inclusion of out-ofnetwork shopping helps to retain customers in the program and lift their spending within network. The multi-activity latent model is adapted to exam the interactions between innetwork and out-of-network purchase and how out-of-network purchase influence the members' attrition from the program. Furthermore, the incentives of attaining the rewards and direct marketing efforts are incorporated in the model to exam their impact on purchase incidents, spending amount and attrition from the loyalty program. This study contributes several insights into the customer behavior in the loyalty program. First, this model allows us to understand the benefits of including out-of-network shopping in a loyalty program's reward structure. Second, the results allow us to recover the customers' underlying mindset that guides their behavior and predicts whether customers are still alive in the program. Third, the results can help us understand the effects of direct marketing efforts and determine the optimal format and timing of the communication.

2 - Social Influence and Targeted Marketing in the Adoption of Loyalty Programs

Manfred Krafft, University of Muenster, Am Stadtgraben 13-15 48143 Münster, Muenster, Germany, m.krafft@uni-muenster.de, Kalyan Raman, Vijay Viswanathan, F. Javier Sese

Loyalty Programs (LPs) have become one of the most commonly used marketing tools to build profitable relationships. However, despite the growing popularity of LPs, the attention paid by prior research has been mainly devoted to understanding their performance implications. Surprisingly, the study of the adoption process of LPs and, specifically, of the adoption timing, has been subject to less inspection. This lack of research is remarkable, because achieving a successful LP launch critically depends on a firm's ability to obtain the deepest penetration and fastest spread into the market. In this study, the authors draw upon expected utility theory and propose a model in which the time to adopt a LP is affected by social influence and targeted marketing activities. Social influence is conceptualized as a three-dimensional variable encompassing (1) time (capturing the dynamic effects of prior LP adoptions), (2) space (capturing the effect of adoptions on adjacent regions), and (3) quality (capturing the effect of the status of existing adopters on adoption timing). Marketing activities include direct marketing and sales contacts that are targeted at individual customers, which differs from prior research that has frequently investigated the effect of impersonal mass marketing activities. The framework is tested in a B2B setting using Bayesian spatial techniques, and the results show that: (1) sales efforts shorten LP adoption time; (2) social effects are significantly present at the three considered dimensions: time (a higher number of adopters lengthens time to adoption), space (there is high heterogeneity in the susceptibility/immunity of regions to LP adoption in an adjacent region), and quality (high number of platinum adopters shorten time to adoption); and (3) business customers show different predispositions to adopt a LP (individual heterogeneity). The results offer valuable implications for managers to successfully introduce a LP in a business market.

3 - The Impact of Frequent Flyer Programs on Consumer Behavior

Tong Guo, University of Michigan, 701 Tappan St., Ann Arbor, MI, 48104, United States of America, tongguo@umich.edu, Yesim Orhun

Frequent flyer programs in the airline industry are designed to cultivate customer loyalty by setting up tier-related benefit goals. However, if and how such programs influence consumer behavior are open empirical questions. Using a member-level dataset of booking records from a major US carrier, we explore members' willingness to pay for the carrier's flights as they accumulate miles towards the goal. We document a nonlinear relationship between a member's progress toward the goal and the price she pays. The revenue that the carrier can extract from the member first increases in the miles accumulated towards a goal, and then declines as the member gets close to achieving the goal, consistent with exerting more effort when effort is most effective. We explore the mechanisms behind the increased revenues by considering potential changes in the time, class and channel of booking, choice among different flight options on the same route and differences across markets with varying degrees of carrier concentration.

4 - Habit Evolution Under a Loyalty Program

Yuping Liu-Thompkins, Professor of Marketing, Old Dominion University, College of Business & Public Admin., Norfolk, VA, 23529, United States of America, YXXLiu@odu.edu, Tim Manoles

Previous studies on loyalty program effects have focused on incremental measures such as changes in purchase frequency, share of wallet, and total spending. These outcomes neglect an important aspect of consumer behavior – purchase habit. That is, do loyalty programs strengthen or weaken purchase habit? Answer to this question is important as previous research has linked strong habit to higher resistance to competitive offers and less brand switching. To this end, the current research investigates the evolution of purchase habit under a loyalty program and identifies program and individual factors that may facilitate or inhibit habit development. Using transaction records from members of a major travel industry loyalty program both before and after they joined the program, we find that the program initially disrupts consumer habit. However, with overtraining and reduced instrumentality of actions over time, the loyalty program has a long-term positive effect on habit. Furthermore, consumers' initial patronage level, joining mode, and point earning preference moderate the effect of the program on habit. Although previous research shows limited incremental effect of loyalty programs on existing heavy buyers, our results demonstrate the value of such programs in routinizing heavy buyers' purchases, more so than for initially light buyers. We also find that being offered a joining incentive reduces the positive long-term effect of the loyalty program on habit, and that earning points through the focal program rather than a partner program (e.g., a frequent flyer program) strengthens the positive habit effect.

■ SA10

Room E331

Entertainment; Hedonic Goods II

Contributed Session

Chair: Yi Zhang, Carnegie Mellon University, 4800 Forbes Avenue, Pittsburgh, PA, United States of America, yzh@cmu.edu

1 - "Keep Your Consumer Challenged": An Examination of Consumer Learning from Failure

Dominik Mahr, Assistant Professor, Maastricht University, Tongersestraat 53, 6211 LM Maastricht, Maastricht, Netherlands, d.mahr@maastrichtuniversity.nl, Robert Ciuchita, Gaby Odekerken-Schröder

Recent calls for research have raised the issue of how service providers can help consumers enhance their performance and become more engaged with services. Addressing this research question is of specific importance for industries such as entertainment services (e.g. online video games) where companies need to keep their consumers excited with new challenges, while making sure they are not overburdening them. We posit that a certain challenge threshold stimulates entertainment service usage and keeps consumers engaged. To investigate what determines consumers to stop using such services, we take a longitudinal approach and examine how consumer learning from challenges during service usage affects long-term consumer performance. Therefore, we have collected and analyzed extensive behavioral data from a large number of consumers playing an online, multiplayer video game for a period of 12 months. The challenges consumers face while playing are dictated by in-game goals; being overly-challenged leads to consumer perceptions of failure and even the decision to stop using the service. However, consumer learning from such failures, a reflection process through which consumers reassess their in-game options (e.g. available items and abilities), can help improve their performance and remain engaged. With our study we contribute to the literature streams on consumer usage of services and consumer learning by investigating to what extent learning from challenges during service usage affects consumer behavioral loyalty. Moreover, our results provide insights to companies on how to facilitate consumer learning and keep consumers engaged by e.g. introducing service updates that maintain the challenge threshold.

2 - Identifying Seasonal Latent Market Segments in the Year-end U.S. Video Game Market

Minjung Kwon, New York University, Stern School of Business, 40 West 4th Street, New York, NY, 10012, United States of America, mkwon@stern.nyu.edu, Masakazu Ishihara, Bryan Bollinger

This paper estimates a model of video game demand that captures the seasonality in the market size due to an exogenous aggregate demand shock, namely Christmas gift shopping. Video games are popular gift items for the holiday, and so the US video game market encounters a seasonal inflow of gift giving demand. We extend the random coefficients model of aggregate demand given in Berry, Levinsohn and Pakes (BLP) by estimating separate demand parameters for a latent segment of holiday gift shoppers, who are distinguishable from mainstream gamers. We find that 66% of holiday demand is due to holiday gift shoppers who are less price-sensitive and have higher utility for newly released and hit products. The main contributions of this research are as follows: Whereas previous models explain seasonal demand using a shift in existing consumers' tastes during high demand period, we provide an alternative explanation which better fits the data and is in better accordance with anecdotal evidence. In addition, we highlight the importance of seasonal demand in the US video game market, a characteristic often ignored in the extant literature on video game markets.

3 - Gone with the Bits: Technology Adoption in the Presence of Piracy

Yi Zhang, Carnegie Mellon University, 4800 Forbes Avenue, Pittsburgh, PA, United States of America, yzh@cmu.edu, Rahul Telang, Vibhanshu Abhishek

Advances in technology have enabled producers of entertainment goods to reach customers in innovative ways. However, new technologies also make it easier for users to infringe on content. Highly concerned with their copyright protection, producers argue that piracy hurts their ability to innovate. Critics, on the other hand, argue that piracy acts as a leveler in mostly monopolistic industries and encourages consumer friendly innovation. In this paper, we explore the interplay between piracy and technology adoption. We build a dynamic model in which users are heterogeneous in their preferences for digital versions and physical versions. Firms always release a physical product at time t = 0 and then have to make a decision on whether and when to adopt digital platform to facilitate digital release. Release of the physical version itself leads to penetration of piracy, which both cannibalizes physical sales and attracts additional users with high preference for digital version. We first show that when the cost of innovation adoption is negligible, piracy has no effect on technology adoption. The monopolist always adopts the digital platform on time (immediately). We then show that when the cost of digital adoption is large, piracy will act as a competing force and result in earlier adoption if a large number of users are willing to move to the legal version at full price; otherwise piracy will discourage and delay adoption. We further show that when the release of digital platform induces additional piracy, the monopolist always tends to delay product release. Thus, only under specific conditions does piracy create incentives to adopt innovations. In most cases, piracy discourages innovations. We find that, while some level of piracy is beneficial to consumers, higher level of piracy delays adoption, hurting overall consumer welfare. Our model provides specific empirically measurable conditions that would suggest a productive or damaging role on piracy.

■ SA11

Room E334

Channels: Governance

Contributed Session

Chair: Amrit Tiwana, Professor, University of Georgia, Department of MIS, Terry College of Business, Athens, GA, 30602, United States of America, tiwana@uga.edu

1 - How Mismatches Between Contract Incompleteness and Governance Form Influence Transaction Costs

Stephen Kim, Professor, Iowa State University, Department of Marketing, College of Business, Ames, IA, 50011, United States of America, stevekim@iastate.edu, Amrit Tiwana

Transaction cost theorists recognize that contracts are inherently incomplete because boundedlyrational managers cannot anticipate all future contingencies. Prior studies offer divergent interpretations, with some suggesting that the wiggle room left by contract incompleteness can facilitate adaptation and others emphasizing that managers should make contracts as more comprehensive to safeguard against opportunism. We posit that the consequences of contract incompleteness cannot be analyzed in isolation from the governance form within which the contracting occurs. We address the unexplored question of how and why mismatches between contract incompleteness and governance form used by a franchise chain influence interfirm transaction costs between the franchise owner and franchised stores. We theoretically develop two interrelated ideas to address this question. First, we theoretically develop two distinctive pathways, ex-ante ink costs and ex-post adaptation costs that influence overall ex-post transaction costs. We argue that contract incompleteness lowers ex-ante ink costs but simultaneously increases ex-post adaptation costs. Second, we theorize that the chain's governance structure – plural governance (simultaneous use of corporate and franchised stores) versus singular governance (predominant use of corporate or franchised stores) – differentially moderates the effect of contract incompleteness on ink and adaptation costs. Plural governance amplifies the negative effect of contract incompleteness on ink costs but buffers the positive effect of contract incompleteness on adaptation costs. We test our predictions with the data collected from a survey of 282 U.S. franchise chains on their contracts, governance structures, and interfirm transaction costs. Our expected contribution is a theoretical explanation of how and why alignment of contract incompleteness with chain governance form economizes on interfirm transaction costs.

2 - Optimal Buyback Policies in Channels

Thanh Tran, Assistant Professor, University of Central Oklahoma, 100 N. University Drive, Edmond, OK, 73025, United States of America, ttran29@uco.edu, Ramarao Desiraju, Haresh Gurnani

Interesting developments are on the horizon in retailing: for instance, UK retailers are increasingly scrapping their 28-day buyback policy and adopting more generous approaches. Given such trends, this paper explores the impact of alternative contractual agreements between channel members facing an uncertain demand. Using observations from practice, we develop a mathematical model involving a supplier and its retailer in Stackelberg leader and follower roles, respectively, and derive the optimal policies for the supplier. Our analysis characterizes the tradeoffs involved and identifies conditions under which different types of buyback policies are preferred by the supplier and the retailer.

3 - Relationship-specific Investment and Hold-up Problems in Supply Chains: Theory and Experiments

Ernan Haruvy, Associate Professor, University of Texas-Dallas, 800 W. Campbell Rd., Richardson, TX, United States of America, eharuvy@utdallas.edu, Elena Katok, Owen Ma, Suresh Sethi

Supply chains today routinely include using third parties for many strategic activities, such as manufacturing, R&D, or software development. These activities often include relationship-specific investment on the part of the vendor, while final outcomes can be uncertain. Therefore, writing complete contracts for such arrangements is often not feasible, but incomplete contracts, especially when relationship-specific investment is required, may involve a hold-up problem. The presence of the hold-up problem is known to result in sub-optimal levels of investment. We model the phenomenon as a sequential move game with asymmetric information. Absent behavioral considerations, the unique Perfect Bayesian Equilibrium implies zero investment. However, with social preferences, the hold-up problem may be mitigated. We propose a model that incorporates social preferences and random errors, and solve for the equilibrium. In addition, we look at reputation as an alternative mechanism for mitigating the hold-up problem. We conduct laboratory experiments with human subjects and find that a model with social preferences and random errors explains the data well.

4 - Orchestrating Franchise Ecosystems: Aligning Organizational Architecture with Control

Amrit Tiwana, Professor, University of Georgia, Department of MIS, Terry College of Business, Athens, GA, 30602, United States of America, tiwana@uga.edu, Stephen Kim

A key challenge in managing franchise ecosystems is striking the "right" balance between franchised vis-à-vis company stores. The tradeoff for the franchise chain's "hub" firm (i.e., franchisor) is balancing adaptation in diverse local markets served by franchisees versus chainwide adaptation. An underappreciated nuance in this context is that franchise ecosystems must simultaneously exhibit both local and chainwide adaptation – or what we call ecosystem agility – to thrive in diverse markets. We address the question of how and why alignment of the chain's organizational architecture and the formal control portfolio it uses over franchisees jointly engender such ecosystem agility. The study builds on modular systems theory to conceptualize a franchise ecosystem's architecture in terms of its organizational modularization. We theoretically develop three ideas. First, orchestration of the franchise ecosystem by the hub firm simultaneously enhances its local adaptation and global adaptation. Second, increasing organizational modularization of a franchise ecosystem enhances ecosystem agility only when it is complemented by an appropriately designed formal control portfolio of process control and output control. Third, this architecture-control alignment enhances ecosystem agility because it facilitates orchestration – our explanatory mechanism – of the diverse capabilities, local knowledge, and resources dispersed across the franchise ecosystem. Results using primary data collected from 282 US chains strongly support the proposed ideas. We endogenize both organizational modularization and formal control portfolio to cumulatively build on prior franchising studies. Our key theoretical contribution to the marketing literature is a theoretical explanation for how and why alignment between franchise chains' organizational modularization and control portfolio deployed by the hub firm influences their capacity to simultaneously be locally and globally adaptive.

■ SA12

Room W300

Pricing & Retailing

Contributed Session

Chair: Koray Cosguner, Assistant Professor of Marketing, Georgia State University, 35 Broad Street, Suite 1318A, Atlanta, GA, 30339, United States of America, kcosguner@gsu.edu

1 - Look Before you Lease: Evaluating the Consequences of Residual Value Promotions in the Automobile Market

Srabana Dasgupta, Simon Fraser University, 8888 University Drive, Burnaby, BC, V5A 1S6, Canada, srabanad@sfu.ca, Jorge Silva-Risso, Sivaramakrishna Siddarth

In the automobile market, manufacturers typically promote lease contracts by inflating residual values above the value dictated by vehicle depreciation rates. This strategy increases lease attractiveness for consumers by lowering monthly payments. Because this strategy also reduces the call option value of the lease, the consumer must trade-off this downside with the benefit of the lower payments. From the firm's perspective, its pricing decision is further complicated by the fact that committing to a pre-determined residual value increases costs by reducing its ability to sell the used car at a higher price. Combining transaction data of used and new cars from the U.S. automobile market, we develop a model of firms' price setting behavior that incorporates the trade-off consumers make when evaluating leases. Specifically, we model the value generated by the call option as a function of both the vehicle's expected depreciation rate and its variance. Our research thereby provides directions to both managers and policy makers by understanding the potential consequences of exogenous changes such as changes in the distribution of the depreciation rate or changes in cost factors.

2 - Price Negotiations and Bargaining Costs

Pranav Jindal, Assistant Professor of Marketing, Pennsylvania State University, 479 Business Building, University Park, PA, 16801, United States of America, pranav.jindal@psu.edu, Peter Newberry

We develop a structural demand model in which a consumer can either buy a product at the posted price or can choose to negotiate a lower price after incuring a bargaining (negotiation) cost. Using simulation, we show that the bargaining cost, the distribution of bargaining power and product and price preferences are identified under different data limiting assumptions. We then estimate the model using data on individual transactions from a large appliance retailer. The key feature of the data that allows us to identify bargaining costs is the fact that we observe both individuals who bargain and individuals who do not. The estimates allow us to compare consumer benefit and firm profit under two different pricing regimes: fixed pricing and price negotiation.

3 - Save or (Over-)Spend? How Shopping Pattern Choice Affects Consumer Grocery Spending

Mark Vroegrijk, Postdoctoral Researcher in Marketing, KU Leuven, Korte Nieuwstraat 33, Antwerp, 2000, Belgium, mark.vroegrijk@kuleuven.be, Katia Campo, Els Gijsbrechts

Consumers can nowadays engage in a variety of shopping patterns. Especially "multiple-store shopping"; the systematic patronage of more than one store for the same purpose (e.g. grocery shopping), has become rather popular. A major reason to opt for such a pattern is that it provides an opportunity to save money. However, behavioral literature suggests that this way of shopping may also affect consumers' ability and motivation to reap these savings. This raises the question whether multiple-store shoppers (possibly depending on the store formats they visit and how these visits are organized) actually spend less in the end. Using scanner panel data for over 1300 households, we shed light on this issue by comparing consumers' expenditures across different types of single- and multiple-store patterns, while controlling for household-specific and situational factors. Our results show that, inconsistent with the savings perspective, multiple-store shoppers actually spend more on groceries than single-store shoppers. This suggests that multiple-store shoppers are not fully able and/or motivated to capitalize on the savings opportunities available to them – e.g. because of a larger number of prices and/or in-store stimuli to process. These additional expenditures become especially high when multiple-store shoppers combine visits to the different stores (instead of visiting them on separate occasions). For such "chained-trip" patterns, we find that not even the inclusion of a (EDLP-oriented) hard-discounter helps to reduce overall spending.

4 - Profiting from Asymmetrically Dominated Alternatives: The Case of Diamond Pricing

Chunhua Wu, Assistant Professor of Marketing, University of British Columbia, 2053 Main Mall, Vancouver, BC, V6T 1Z2, Canada, Chunhua.Wu@sauder.ubc.ca, Koray Cosguner

The decoy effect, first documented by Huber et. al (1982), states that adding asymmetrically dominated alternatives to a choice set would increase the purchasing probability of dominating alternatives. In this paper, we empirically test the existence of this effect by using unique panel data from an online jewelry retailer. We first document the existence of decoy pricing in the loose diamond category, where diamonds with the same set of characteristics are priced significantly different. In order to quantify the decoy effect, we estimate a proportional hazard model by incorporating the underlying decoy/dominance relationships among diamonds. Our estimates suggest the existence of decoy diamonds significantly increase sale likelihoods of dominant diamonds, and this effect becomes stronger for more expensive diamonds. These suggest that the retailer should include more decoys at higher price range diamonds. We next use a simulation study to quantify the overall revenue impact of decoy pricing. We find that the current decoy pricing scheme improves the retailer's overall revenue by 7.7% compared to a uniform pricing strategy. Finally, through a second simulation study, we check how the retailer's revenue would change if the retailer modifies its current decoy pricing scheme. We find that the retailer might further increase its revenue by 2.8% through increasing the price dispersion of diamonds with the same set of characteristics by 50%.

■ SA13

Room W330

Product Management Strategies

Contributed Session

Chair: Mahmood Pedram, Assistant Professor, American University in Dubai, P.O. Box 28282, Dubai, United Arab Emirates, mpedram@aud.edu

1 - How Platform Openness and Complementary Software Openness Shape Software Upgrade Strategy

Yi Wang, Emory University, 2118 Spaulding Avenue, Apt. 7, Berkeley, CA, 94703, United States of America, wy817emoryphd@gmail.com, Benn Konsynski

Software upgrade strategy, i.e., the periodic introduction of new versions that are variants of existing versions with improved functionalities and features, is considered as one of the more critical product strategies of software firms. The timing of software upgrade is the central element of this strategy as it significantly affects profitability. Prior theoretical literature has well established that vendors upgrade software because an old version becomes technically obsolete with the passage of time, the entry of more competitors, the technological advances, and the expansion of consumer needs (Greenstein & Wade, 1998; Mehra & Seidmann, 2008). However, there is a surprisingly paucity of empirical work that systematically tests this theory (see Turner et al. 2010 for an exception). Drawing on this line of research, we introduce seminal econometric evidence on how software upgrade pace is shaped by time and upgrade from competing software and complementary platforms. More importantly, recognizing the prevalence of open source strategies in software industry, we further examine how such response varies by the level of software openness and platform openness. It remains largely unexplored and indecisive how openness at both software level and platform level shapes innovation, software upgrade in particular, as there is very limited literature that examines the competitive dynamics between proprietary software (hereinafter PS) and open source software (hereinafter OSS), and its implications for the innovation activity. This empirical exercise is conducted in the context of computer Operating System (hereinafter OS) platform/software paradigm. A unique and comprehensive dataset on the upgrade history of software released between January 1995 and August 2010 is collected from various major software development and download websites, yielding a sample population of approximately 230,000 software and 800,000 versions. In order to answer our research question, we employ recurrent event survival models, Prentice, William and Peterson (1981)'s model in particular, which accounts for the lack of independence among multiple clustered failure time and allows the baseline hazard to vary across different events. Our preliminary results from a random sample of 300 software reveal some interesting results. First, software upgrade pace decreases over the life cycle of software. Second, software of higher level of openness tends to have faster upgrade pace. Third, more closed platform is associated with faster software upgrade pace. Finally, in contrast to the widely adopted vision that OSS developers are non-strategic, OSS developers indeed react to the strategic conducts of their proprietary counterparts and adjust their level of investment in OSS developments.

2 - Product Line Design in the Presence of a Flat-rate Bias

Bobby Zhou, PhD Candidate, Duke University, 100 Fuqua Drive, Box 90120, Durham, NC, 27708, United States of America, bo.zhou@duke.edu, Debu Purohit

In the telecommunications market, firms typically offer consumers a menu of contracts that include an allowance of minutes (or data) at a fixed rate and a subsequent fee, or overage price, associated with usage that is above the allowance. When facing such a menu of three-part price plans (allowance, price and overage price), consumers often exhibit a flat rate bias. That is, they prefer to pay a flat rate for an allotment of minutes even though they would incur lower costs with a plan based solely on the number of minutes consumed, i.e., a pay-per-use tariff. This occurs principally because consumers cannot perfectly predict the number of minutes they would need in a given time period; thus, they tend to be biased toward making sure they have more than enough minutes in their allowance. The theoretical challenge is to model this bias and design a menu of contracts that maximize firm profits. In this paper, we use a gametheoretic framework to show how a flat rate bias affects a monopolist firm's design of its product line. We incorporate two sources of the flat rate bias: consumers dislike overage prices more than the regular price of a plan, and they dislike the possibility of not being able to communicate as much as they desire (forgone consumption). Interestingly, we find that the high-valuation consumer segment always obtains an unlimited plan while the low-valuation segment gets a limited plan. In addition, we show how the firm can vary the quality levels across different plans to maximize profits.

3 - New Product Incrementality

Nazrul Shaikh, Assistant Professor, University of Miami, 279 McArthur Engineering Building, Coral Gables, FL, 33146, United States of America, n.shaikh@miami.edu

As consumers are more concerned about the health and environmental aspects of (not) eating fruits and vegetables in recent years, increasingly more research has been con- ducted in order to explore consumers preference of organic and local fruits and veg- etables. Although both the information related to production practices (e.g., organic) and production locations (e.g., local vs. imported) may increase price premium some consumers are willing to pay, they appear to be nonetheless distinctly valued by con- sumers. For example, in two discrete choice experiments involving tomatoes and apples, Onozaka and McFadden (2011) found that locally grown was valued higher than organic by consumers, and its value was augmented with fair trade certification. Furthermore, it was found that the organic certification mitigated the negative valuation for imported vegetables. Similar findings were reported by Ekelend, Fernqvist and Tjarnemo (2007), whose conjoint analysis showed that that Swedish respondents ranked production origin (i.e., produced in Sweden vs. imports) higher than production method (e.g., organic vs. conventional) in the case of carrots and tomatoes. Although these findings shed light on consumers' valuation of local and organic labels in the produce domain, it is not certain to what extent consumers' choice from one category at a time may extend to the real produce shopping context. Since consumers rarely purchase one type of vegetable at a time, it is worth investigating consumers' valuation of local and organic labels may vary across multiple types of vegetables that are considered for purchase at the same time. Furthermore, given a budget constraint, local and organic label may interact with the type of vegetables liked or disliked by a consumer. For example, as much as a consumer prefers local produce, she may skip local broccoli to compensate for expensive local asparagus, which is her favorite vegetable in spring season. Another consumer may buy inexpensive imported asparagus and broccoli because they are consumed together at home. Still another consumer may totally skip asparagus and buy inexpensive tomatoes and potatoes since he does not like asparagus or since he wants the biggest bang out of his budget. In order to consider cross-category dependence across different vegetables, it is nec- essary to analyze what vegetables are put (and are not put) in a consumer's shopping basket. In the next section, we provide a brief review of market basket analysis literature, and explain how basket analysis can be applied to the analysis of choice of vegetables.

4 - Before or After: Optimal Product Release Timing

Mahmood Pedram, Assistant Professor, American University in Dubai, P.O.Box 28282, Dubai, United Arab Emirates, mpedram@aud.edu

New product introduction is inherently a dynamic process. Firms must decide not only the quality of the product they release but also the timing. Competition also plays a role in determining when a firm should release its product. In the context of a product's life cycle, intuitively, firms should strive to stagger their product releases in an effort to reduce competition. Yet, we do not observe such a behavior in the marketplace. In the auto industry, firms release competing products within a year or so of their competitors. In the video gaming industry, console manufacturers are in virtual sync with regards to the release of their next generation products. Most firms in various tech industries like computer hardware, mobile phones, and digital cameras also tend to release their new products around the same time. In this research, an attempt is made to model the behavior of market participants to find out the optimal product release schedule for each competitor. In particular, seller heterogeneity in terms of brand pull, consumer heterogeneity in terms of brand loyalty, and product purchase and replacement behavior is included. Conditions under which firms might opt to follow a synchronized release schedule are derived, as well as conditions under which they will engage in an out-of-sync release strategy.

Saturday, 10:30am - 12:00pm

■ SB01

Room E130 (Aud.)

Sheth Medal: John D.C. Little's Contributions to Interactive Marketing

Cluster: Special Sessions

Invited Session

Chair: Ruth Bolton, Vice President, LINKS-simulations.com, Winter Garden, FL, 34787, United States of America, rb@ruthnbolton.com

1 - Sheth Medal: John D.C. Little's Contributions to Interactive Marketing

John Hauser, Professor, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA, 02139, United States of America, hauser@mit.edu, John Roberts, James Lattin

Broadly defined, Interactive Marketing is now a mainstream topic that permeates all aspects of the marketing discipline. This session assesses our progress on this topic over the past 50 years, using the contributions of John Little (Winner of the Sheth Medal) as an organizing framework. John Hauser, James Lattin and John Roberts will each offer their perspectives on the past, present and future of interactive marketing. John Little will also contribute some brief remarks on the future of the field.

■ SB02

Room E208

B2B Networks, Alliances and Collaboration II

Contributed Session

Chair: Tianjiao Qiu, California State University Long Beach, 1250 N Bellflower Blvd., Long Beach, CA, 90840, United States of America, tianjiao.qiu@csulb.edu

1 - Online Global Trading Marketplace as a Buyer-seller Social Network

Jurui Zhang, University of Massachusetts-Boston, 100 William T Morrissey Blvd., Boston, MA, 02125, United States of America, jurui.zhang@gmail.com, Yubo Chen, Qi Wang, Jinhong Xie

The growing online global trading marketplaces provide unprecedented access and opportunities for firms to expand their business to global markets. By aggregating thousands of sellers and buyers, they create complex buyer-seller social networks where different sellers become connected with each other through the common buyers with whom they have traded. While these networks create tremendous competition for sellers, they also provide sellers a unique platform to learn market environments through the implicit social interactions with other sellers, without physically entering different international markets. This paper investigates the unique features of the online global trading marketplace from a network perspective. Specifically, we study how implicit social interactions in this platform affect sellers' performance, how such impacts vary in developed versus emerging markets, and how they were affected by the global financial crisis.

2 - Unpack Absorptive Capacity under the Context of Knowledge Alliances: A Dynamic and Coevolution Model

Zhiying Jiang, Assistant Professor, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, Netherlands, jiang@ese.eur.nl, Junhong Chu

The concept of absorptive capacity has been widely used in more than 900 peer-reviewed papers ever since Cohen and Levinthal 's seminal work in 1990 . However, the measurement and operationalization of absorptive capacity has been problematic in empirical research, due to the complexity of the construct itself. In this paper, we use a 3 stage structural model to unpack absorptive capacity so that a sequential relationship between each dimension of absorptive capacity is delineated and measured precisely. Our study substantiates each dimension of the construct and captures the interrelationship in a unified framework. Hence, it provides implications to firms on building and strengthening its absorptive capacity, which makes them adaptively innovative and structurally flexible.

3 - Product Diversification and Cultural Alignment on the Success of International Marketing Alliances

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In a highly uncertain and risk-laden international marketplace, a primary determinant of market success is a firm's capability to monitor its product portfolio progressively. International marketing alliance – a cooperative cross-national inter-organizational relationship – is one of the most popular business strategies to overcome firms' technology, financial and market constraints to maintain a successful product portfolio since alliance relationships can help firms to achieve increased sales through extended product life cycle and the continual product improvements and upgrades. Research has demonstrated that cultural distance, the relative similarity of two cultures to each other, has significant negative impacts on collaboration effectiveness and offshoring decisions. However, little is known whether a particular high or low degree of a cultural dimension (individualism versus collectivism, power distance, uncertainty avoidance, and masculinity versus femininity) affects performance outcomes of product portfolio strategies in the alliance relationships. In the study, drawing on resource dependence theory, we incorporated the macro-level cultural values to examine how the alignment of the four dimensions of cultural values affects the relationship between product portfolio diversification and market performance of the alliance partners. We empirically examined the research questions with longitudinal data on companies that have engaged in international marketing alliance between 2002 and 2008. Hierarchical linear modeling techniques were used to test the multi-level model. The findings demonstrated that the cultural distance of individualism strengthens the relationship between product diversification of the alliance company and its market performance.

■ SB03

Room E204

Brand Valuation

Contributed Session

Chair: Raj Sethuraman, Southern Methodist University,
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1 - Employee-based Brand Equity

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This paper introduces the concept of employee-based brand equity – the value that a brand provides to a firm through its effects on the attitudes and behaviors of its employees – and empirically demonstrates its significance on executive pay. We theorize that executives value being associated with strong brands and, therefore, accept substantially lower pay at firms that own them. Consistent with social identity theory, this effect is stronger for CEOs compared to other top executives, as well as for younger executives. We empirically test our findings on a large sample of top five executives employed by firms included in Young and Rubicam's Brand Asset Valuator surveys. Our findings suggest that academics and practitioners should take a broader view of the contributions of brand-related investments to firm value, as well as make use of strong brands in pay negotiations that are typically viewed as being outside the realm of marketing.

2 - Business-to-business Branding Effects Insights from the Venture Capital Industry

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Lyda Bigelow, Robert Wuebker

The current marketing literature on branding focuses on the effects of a business or product brand on the individual consumer. This research looks at the impact of branding in a distinct business-to-business environment, the Venture Capital industry. Using Adaptive Choice Based Conjoint survey data from practicing venture capitalists in both North America and Europe, we examine how investment decisions are impacted by branding from two different aspects. The first, highly researched, branding effect is of the reputation or brand of the entrepreneur that is leading a proposed new venture. The second, and not previously investigated, branding aspect we look into is the brand name of the lead investor in a potential investing deal. Standard hierarchical Bayes conjoint methodologies for analyzing our survey data show that the reputation of the founding team has a significant impact on the VC financing decision. However, we also get the rather surprising result that the brand of a lead investor in a venture deal has a very modest, if any, effect on venture capitalist decision-making. However, additional analysis reveals unexpected insights about how branding in the venture capitalist industry disparately impacts different decision makers within the VC firm. By adding demographic covariates into our regressions, we find that the level of organizational responsibility of the respondent provides additional insight into venture deal evaluation.

3 - How Useful are Brand Valuation Methods? A Validation Study

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Tobias Hornig

The financial value of a brand is of high interest to many stakeholders and decision makers. As a result, several methods have been suggested to measure the brand value in the past. Their results, however, differ to a great extent, which raises the question about the validity of these methods. Unfortunately, the true value of a brand is not known, which complicates the check for validity. Building on scale development theory from consumer behavior, we develop a procedure for testing financial brand valuation methods with respect to reliability, construct validity, and predictive validity. We apply this test procedure to 9 prominent valuation methods that cover the basic valuation philosophies: cost-based, market-based, and income/DCF-based approaches. Our sample compares 36,992 financial values of 3,879 brands, which were produced by 9 valuation methods, over a period of 22 years from 1990 to 2011. The results provide interesting and surprising results. Generally, the methods perform well in terms of reliability, convergent validity, and discriminant validity. There are, however, substantial concerns about nomological and predictive validity. Only very few methods meet these criteria. To our surprise, the theoretically inferior cost-based approaches show a performance comparable to the other valuation approaches and sometimes even a better performance.

4 - How Good are the Outcome Premium Measures in Capturing Brand Equity?

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Brand equity is broadly conceptualized at the consumer level as a favorable mindset that consumers uniquely associate with the brand name. This brand characteristic is considered an intangible asset and a significant source of financial value to the firm that owns the brand. Because consumer level brand equity is latent (unobservable), researchers have proposed outcome (observable) measures of brand equity – especially, price premium, share premium, and revenue premium. We define consumer level equity in terms of incremental utility for the brand and derive an aggregate demand function that incorporates this utility. Then we perform a game-theoretic analysis of the duopoly model and compute equilibrium values of price, share and revenue premium and relate it to the utility measure of brand equity. We are thus able to assess which of the premium measures does the best job of capturing consumer level brand equity as well as explore if there are other outcome measures that can do as well or better job of measuring brand equity.

■ SB04

Room E201

e-Word of Mouth II

Contributed Session

Chair: Anita Luo, Assistant Professor, Georgia State University,
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1 - Mining Emotions from Customer Reviews for Box Office Movies

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Online word-of-mouth, most commonly encountered in the form of online customer reviews, has received considerable attention recently by both academics and practitioners alike. Previous works studied the impact of product reviews on sales by measuring the volume and numerical ratings of reviews. We argue that Product reviews are multifaceted, and hence the textual contents of product reviews are important determinants of consumers' choices over and above the valence and volume of the reviews. An important antecedent for the generation of word-of-mouth is a strong emotional response, which triggers the consumer to post a review online. In this paper, we examined emotional contents in the movie reviews. Our results suggest that the overall fraction of positive emotions is greater than negative emotions. We also find that there is more positive emotional content toward positive extreme ratings than negative emotional content toward negative extreme ratings. More important, we find that there is more emotional content as well positive emotional content in movie reviews in the opening weeks compared to the pre-release week. Finally, there is negative emotional content in movie reviews in the later weeks compared to prerelease and release week.

2 - A Model of Heterogeneous Peer Influence in New Music Diffusion on Twitter

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As online sharing of music via social network service (SNS) emerges as a promising mean for diffusion of new music, music companies are focusing on identifying persons who have strong influence on other music consumers. While many previous studies on Word-of-Mouth (WOM) marketing have emphasized the role of highly connected customers, so-called the 'hub', this study examines the opinion leadership based on network centrality as well as the dyadic properties of interpersonal relationships such as communication frequency and network embeddedness in diffusion of new music. In detail, we delve into the diffusion mechanism by means of online music sharing which is observed in the large-scale Twitter data. An individual's music sharing decision is modeled as a discrete choice in a Bayesian learning fashion, where each Twitter user updates her/his beliefs about the quality of musicians influenced by their online peers who are classified into 8 different groups. We find that consumers are more affected by peers with high communication frequency. Interestingly, it turns out that highly connected consumers are less influential than others. Also, we conduct the counterfactuals and show that the WOM marketing strategy utilizing disproportionate influence of each of 8 peer types is more effective than pre-existing marketing strategies.

3 - Product Inquiry and Social Recommendation: WOM Generation for Service Retailers on Daily Deal Sites

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In this study we investigate how product (service) features, terms of transaction and competition affect two very different word-of-mouth (WOM) activities: product inquiry and social recommendation. Product inquiry used to be mainly between a seller and a buyer in the past, but in the recent years it is shared by many potential buyers due to the public nature of the product Q&A board. Thus we consider this an important type of WOM. The empirical setting is a daily deal site where small offline service businesses can readily promote and sell their services in the form of a discounted voucher. We show that indeed the generation of two WOM activities is affected differently by various deal-related factors and competitive elements. Specifically, shorter sales duration increases social sharing while it decreases product inquiry. Crowding of deals in the platform encourages social recommendation while it negatively affects the amount of product inquiry. Product inquiry increases with higher minimum quantity and duration of voucher validity; it is also affected by price and the degree of offline competition. Meanwhile social recommendation is not affected by these factors. This work intends to contribute to the literature by empirically investigating the generation process of two very different WOM and give insight to managers in optimizing WOM and ultimately the resulting sales.

4 - Modeling Online and Offline Word of Mouth Behavior

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With the popularity of new media outlets such as online channels, it is strategically important for companies to understand how customers spread word-of-mouth through online and offline channels. However, there are not enough studies that have empirically examined how customers choose different channels for positive or negative word-of-mouth. We developed a two-stage model to capture the evolution of brand value over time, and customers' word-of-mouth behavior given the brand value. In the first stage, the proposed model suggests the true value of a brand transition from the previous value through a Markov process, depending on brand-level satisfaction information and the percentage of people recommending the brand in the previous time period. In the second stage, we model customers' decisions to whether to recommend a brand and whether to use an online vs. offline channel through a multinomial probit model. Customers' recommendation behavior depends on the brand value captured in the first stage model and the audience of recommendation, such as family, friends, co-workers, etc. Our empirical findings contribute to the literature in the following ways: 1. They would enable companies to understand how brand value is influenced by customers' satisfaction and customers' recommendation behavior at the aggregate level, therefore strategically managing customers' word-of-mouth behavior; 2. They would help companies to examine how customers spread positive vs. negative word-of-mouth through offline vs. online channels given the brand value. Therefore, companies can influence word-of-mouth customers' behavior by contacting them through various channels.

■ SB05

Room E231

Modeling for Online Marketing

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Florian Wangenheim, Professor of Technology Marketing, ETH Zuerich, Department MTEC, Zurich, 8092, Switzerland, fwangenheim@ethz.ch

1 - An Analytical Model of Crowdfunding

Mark Bender, University of Pittsburgh, Katz Graduate School of Business, 282 Mervis Hall, Pittsburgh, PA, 15260, United States of America, mtb34@pitt.edu, Tansev Geylani, Esther Gal-Or

We examine conditions under which it is profitable for firms and entrepreneurs to utilize crowdfunding websites (Kickstarter, Indiegogo, Fundable, etc.) to finance new products. Crowdfunding websites provide a platform for firms to extract surplus from consumers who may benefit from a product innovation by collecting consumer donations for new products; however, it is important that firms provide the right incentives to prevent freeriding. Borrowing from the economic literature on public goods, we construct a model of consumer donation behavior, but in lieu of the expected consumption of a public good, we incorporate the expected consumption of private products which have been successfully funded. We consider how agent behavior is impacted by various crowdfunding campaign decision variables including donor reward, threshold level, rebate rule, and platform fee. From our model, we derive the optimal inducement that innovating firms should provide to donors. We calculate the optimal donation threshold to be set by a campaigning firm, the characterization of which depends on a firm's ability to raise funds from more traditional investors. Moreover, we determine the ideal fee a platform should charge firms for use of their crowdfunding service.

2 - Sniping in Online Markets

Amin Sayedi, Assistant Professor of Marketing, University of North Carolina, Chapel Hill, 300 Kenan Center Drive, Chapel Hill, NC, 27599, United States of America, sayedi@unc.edu, R. Ravi, Isa Hafalir, Stylianos Despotakis

Online second-price auctions such as in eBay have raised interesting research questions on buyer and seller behavior as well as on the evolution of these marketplaces. Using an analytical model incorporating buyers' information asymmetry, we examine two main questions: first, we study the common phenomenon of "sniping" (submitting bids only in the very last minute before the auction ends) in such markets; second. we use the buyer behavior in our model to explain the move by sellers on eBay from selling via auctions to using posted prices over time. We show that buyers' information asymmetry about the value of the item can lead to the sniping behavior. In particular, buyers with more information can benefit from sniping by not revealing the value of the item to their competitors who have less information. Furthermore, we show that, under certain conditions, sellers can use the selling mechanism (auction vs. posted price) to signal the value of their item to the buyers. Our analysis gives insights into the types of categories where the sniping behavior and move to posted prices are prevalent.

3 - Interdependence of Online Community Success Factors – Evidence from Panel VAR

Florian Wangenheim, Professor of Technology Marketing, ETH Zuerich, Department MTEC, Zurich, 8092, Switzerland, fwangenheim@ethz.ch, Christine Igl, René Algesheimer

Marketers have become more and more interested in studying the rise and fall of different communities. Community growth, participation, and network structure have been identified as relevant factors for ensuring community success. In this paper, the authors analyze the interdependence between these success factors over time as well as over community-lifecycle- phase. The interplay between success factors requires further investigation because it is unclear whether each factor can be maximized independently from the other factors or whether the factors should be considered simultaneously. Moreover, it is unknown whether each community-life-cycle-phase requires different efforts for ensuring community success. The authors use data from different regional online social communities, which can be assigned to two different community-life-cycle phases (established versus new regions). By applying a Panel Vector Autoregressive (Panel VAR) approach the authors are able to treat all variables as endogenous and to analyze effects in different regions simultaneously. The authors identify significant reciprocal effects between network structure and participation. In contrast, effects of network structure on community growth are not significant. Moreover, other uncovered effects differ regarding the community's life-cycle-stage. Hence, this study provides new insights into the interplay of community success factors and is one of the first studies on across-community data. Results show that conclusions must be drawn depending on the community's life-cycle-stage because of different effects between established and new regions regarding significance and algebraic sign.

■ SB06

Room E234

Social Media II

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Tiffany Wang, Informatics, KNU, Taipei, Taiwan - ROC, tiffanyt.wang122@gmail.com

1 - Word-of-Mouth in the Music Industry: An Empirical Analysis of Music Consumer Network Topology

Jungyoun Lee, KAIST, 291 Daehak-ro, Yuseong-gu, Daejeon, Korea, Republic of, sjlee8867@kaist.ac.kr, Minki Kim

Today's consumers serve as a promotional channel as they share experiences and opinions about products with other consumers via web-based social media. Accordingly, firms have sought to raise awareness of their products by incentivizing consumers to generate electronic word-of-mouth (e-WOM). Yet, marketers cannot ensure such success without understanding the underlying mechanism that motivates consumers to share their experiences with others across online social network services. To show naive social media-based marketing strategies may yield counterproductive and unexpected outcomes without comprehensive understanding of social network structure among consumers, we investigate e-WOM activities of consumers in an online social networking platform delving into the role of consumer-specific network topology. Focusing on the most successful singers making debuts via the two representative music systems in 2011, we apply an Accelerated Failure Time Model (AFTM) with log-logistic specification using the individual-level data on Twitter fan activities. We found that consumers respond differently to the structural change in their communities depending on around whom the communities are constructed. More importantly, e-WOM mechanism on artists also significantly differs across the two types of music debut systems.

2 - I Know What You Are Trying to Do: The Effect of Manipulations of Online Product Reviews on Consumer

Mengzhou Zhuang, Lingnan University, Dept. of MIB, Tuen Mun, N.T., Hong Kong, Hong Kong - PRC, mengzhouzhuang@gmail.com, Geng Cui, Ling Peng

Online product reviews have become an important and influential source of information for consumers. Firms often manipulate online product reviews to influence consumer perceptions about the product, making it a research topic of urgent need for theory development and empirical investigation. In this research, we examine how consumers perceive and respond to the three commonly used manipulation tactics. In the first study using a survey, when consumers were asked to evaluate the three manipulation tactics in terms of their ethicality, deceptiveness, they rate hiding/deleting unfavorable messages (deleting) as the most deceptive and unethical, followed by anonymously adding positive messages (adding), and then offering incentives for posting favorable messages (incentive); . However, in a simulated online experiment in which consumers were unaware of the type of manipulation, adding strategy was rated as the most deceptive, whereas deleting strategy was perceived the least deceptive while all the strategies are perceived to be equally unethical. Moreover, we find that consumers' persuasion knowledge lessens the negative impact of perceived deceptiveness on purchase intention. This research contributes to the online marketing literature by augmenting the Information Manipulation Theory and Persuasion Knowledge Model to examine the deceptive persuasion in the online context and its impact on consumer behavior. Our empirical results provide valuable insight to practitioners and policy makers on the pitfalls of online manipulation activities and the need to ensure the healthy development of e-commerce.

3 - Social Media Engagement and Green Marketing Effectiveness in the Case of an Online Campaign

Tiffany Wang, Informatics, KNU, Taipei, Taiwan - ROC, tiffanyt.wang122@gmail.com

In contrast to the traditional view of the media as a mere tactical vehicle for transmitting messages, the effects of engagement with the media articles or programs as the context on advertising or sustainability marketing have been verified in a recent line of empirical research. In an attempt to explore the impact of social media context on reactions to green marketing and pre-theatrical-release"save the Antarctic ecology" short film's effectiveness, we selected an Earth Day webpage on Facebook for the context in an experiment. The information overload experience with the FB context is found to decrease whereas pessimistic reactions to precautious green marketing film in addition to present save-energy behavior, increase respondents' intention to save energy in the future in the hierarchical regression analysis. Also worthy of note is the respective contribution of Talking/Bonding as well as Utilitarian engagement experience with the Earth-Day FB context to optimistic versus pessimistic reactions toward the sustainability short film. Furthermore, this study assesses one threat to validity by revealing the differences between the treatment group and the context-free control group regarding the effects of reactions to the green-marketing film on change in behavioral intention to save energy.

■ SB08

Room E304

New Product Development & Idea Sourcing

Contributed Session

Chair: Rambod Dargahi, PhD Student, University of Houston, 334 Melcher Hall, Department of Marketing, Houston, TX, 77204-6021, United States of America, rdargahi@bauer.uh.edu

1 - Idea Markets: An Analysis of Social Dynamics in Idea Sourcing and Idea Evaluation

Martin Spann, Professor, LMU Munich, Geschwister-Scholl-Platz 1, Munich, Germany, spann@bwl.lmu.de, Andreas Heusler, Natasha Foutz

Idea markets are a collaborative and competitive methodology for idea sourcing and evaluation in the early phase of the new product development process. Employees across the company are invited to submit their new product ideas on a web platform where they can be jointly discussed and edited. In a second step, these ideas are traded on the platform. This allows the company to evaluate the quality of a new product idea based on its final market price. While previous studies on idea markets deliver promising results on user acceptance and performance of the methodology, deeper insights into their social dynamics and the interaction between their participants are still missing. The goal of this study is to analyze the social dynamics throughout the stages of an idea market. In order to achieve this goal we collected behavioral data in two field experiments. The idea market data allow us to derive several social networks, such as idea sourcing networks, idea collaboration networks, idea communication networks and idea trading networks. By integrating additional data from employee surveys we match these with networks of the participants' working environment within their company. This allows us to identify and discuss dynamic patterns that are critical for idea sourcing and evaluation. Our findings include the analysis of collaborative as well as competitive aspects in the social interaction between participants. Based on expert and executive surveys we also provide insights into the relationship between the quality of a new product idea and activity patterns within the networks.

2 - The Role of Supplier and Customer Involvement in NPD: A Meta-Analysis

Johanna Slot, Assistant Professor of Marketing, Pennsylvania State University, Smeal College of Business, 476 Business Building, University Park, PA, 16802, United States of America, johannaslot@psu.edu, Inge Geysksens, Stefan Wuyts

During the last three decades, firms have increasingly opened up their new product development (NPD) processes to external suppliers and customers. By involving these external parties in their internal projects, firms hope to improve NPD performance. We meta-analyze prior research on supplier and customer involvement in NPD. Drawing on the resource-based view of the firm, we theorize and find that supplier and customer involvement in NPD are driven by the firm's internal resources – in technology and marketing – and by environmental uncertainty – in technology and the market. Subsequently, we argue how supplier and customer involvement affect the NPD project's performance, in terms of product innovativeness, speed to market, and cost performance. We find that supplier involvement improves speed to market and cost performance, but lowers product innovativeness. In contrast, customer involvement improves product innovativeness while lowering speed to market.

3 - Roads to Victory: The Making of Winning New Product Ideas in Crowdsourcing Platforms

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More and more companies have started to harness the creative potential of the crowd (i.e., any group of people in the internet including customers) by utilizing crowdsourcing practices. Crowdsourcing offers unprecedented opportunities for reaching breakthrough ideas, which can considerably improve the success of new product development efforts. However, despite its promises, our knowledge on individual processes behind the creation of new product ideas in crowdsourcing platforms is limited. In this paper, I address this gap by examining how the winning ideas are generated in the contests in InnoCentive online platform. Although prior research often suggest that recombining diverse knowledge for new ideas is crucial for breakthrough idea generation, I theorize and demonstrate that such use of (diverse) knowledge is a double edged sword, which can both enhance or reduce chances of generating winning ideas. Specifically, using diverse knowledge increases the likelihood of generating a winning idea when it is accompanied with a high level of prior expertise and intense focusing of attention on idea generation, or with a strong motivation toward learning new things. In contrast, when people have low levels of such an expertise, attention and motivation, use of diverse knowledge diminishes the chances of generating a winning idea. These findings provide important implications for effective management of idea generation efforts in crowdsourcing platforms.

4 - Feedback in Crowdsourcing: Effect of Motivational Feedback on Idea Quality

Rambod Dargahi, PhD Student, University of Houston, 334 Melcher Hall, Department of Marketing, Houston, TX, 77204-6021, United States of America, rdargahi@bauer.uh.edu, James Hess, Niladri Syam

Many of crowdsourcing companies have online contests in which contestants compete with each other over an award for the best innovative ideas/solutions they can generate. There are different types of online contests: "Blind" innovation contests, in which solutions could be only viewed by the contest holder and not by any other contestants. "Unblind" innovation contests that contestants can acquire information by observing the entries of other users as well as the feedback provided whether by the contest holder or other people who joined the company online community. The type of feedback in our study varies with respect to the source of feedback and the visibility. The feedback provider could be the expert of the company or other regular people (i.e. peers). In addition, feedback could be public that everyone in the contest could be able to see, or private that only is visible to the idea owner. Since constructive feedback, that is both supportive and informative, has been studied in research and development laboratories as a facilitator of creativity, we solely focus on positive or motivational feedback. By manipulating the visibility and the source of feedback, we are going to test the effect of motivational feedback on the outcome of crowdsourcing that is the quality of ideas generated. The quality of ideas generated could be measured based upon the number, originality and feasibility of ideas. In a lab experiment context, we use a web-browser-based software which allows groups of people to interact with each other to real-time online product ideation tasks. This study along with the experiment is considered a unique topic in the context of crowdsourcing.

■ SB09

Room E301

CRM: Loyalty

Contributed Session

Chair: Thomas Reutterer, Professor, WU Vienna University of Economics and Business, Welthandelsplatz 1, Vienna, Austria, thomas.reutterer@wu.ac.at

1 - Product Exchanges and Customer Loyalty

Thomas Eichentopf, Rotterdam School of Management, Burg. Oudlaan 50, Rotterdam, 3062PA, Netherlands, teichentopf@rsm.nl, Raji Srinivasan

Most retailers demonstrate customer orientation and attract risk-averse customers through lenient return and exchange policies. Moreover, customers can sometimes up- or downgrade to a different, but functionally similar product. Unlike product returns, which offer monetary compensation only, product exchange scenarios amend the insurance against financial loss with an attempt to recover the original value proposition. Adapting the failure recovery paradox, we expect product exchange to be an effective recovery mechanism for retailers. . Using established methods to analyze future purchase incidence and value, we apply our expectations to a dataset which covers all transactions of a set of customers of a large U.S. retailer of consumer durables over a period of five years. The insights from our study will advise marketing managers how to increase their performance by effectively managing their product exchange policies.

2 - GMOK: A Generalized Mixture of Kalman Filters Model for Customer Churn Prediction

Niels Holtrop, University of Groningen, P.O. Box 800, Groningen, 9700 AV, Netherlands, n.holtrop@rug.nl, Jaap Wieringa, Maarten Gijsenberg, Peter Verhoef

The increasing growth and detail of CRM databases offers new opportunities for academics and practitioners to improve models for business decision making. In this research we focus on predicting churn, a central observable metric for customer-centric organizations. Leveraging the data richness of modern CRM databases, we are able to include dynamics and unobserved heterogeneity in churn prediction models. While prior research suggests several potential benefits of these extensions, few studies have formally proposed a framework that incorporates these components. Therefore, we develop a generalized mixture of Kalman filters (GMOK) model that accounts for both components simultaneously. In particular, our model combines a dynamic state space model with a mixture model approach. This way, we show to provide better predictions of customer churn than commonly used logistic regression models or classification trees. Beyond the improved predictions of customer churn, our model provides two more advantages over current models. First, our model has greater staying power than benchmark models. The greater predictive power of the proposed model for periods following the estimation period this implies, reduces the need for reestimation and associated time and resource costs. Second, our model compares favorably to related models that try to leverage dynamics and unobserved heterogeneity in terms of estimation time and data requirements. With a substantially lower estimation time and data requirements that are close to those for methods currently used in practice, implementation of our model by practitioners is facilitated.

3 - An Empirical Analysis of Goal Gradient Hypothesis in a Multi-vendor Loyalty Program

Kay Ryung Koo, PhD Student, Korea University, Business School, An-am, Seong-buk, Seoul, Korea, Republic of, kay.ryung.koo@gmail.com, Janghyuk Lee

Existing studies on singly loyalty program mainly investigated the effectiveness of programs based on the structure of the program. In single loyalty program, the success of program is determined by firm's ability of program management: how to build a program's threshold, or which type of reward firm should offer. However, a new type of loyalty program such as multi-vendor loyalty program has been recently introduced to the market and the behavior of participants has been changed dramatically. In this loyalty program, not only firms but members of program have a choice option to decide; how to accumulate the point, when to redeem, what to redeem, and how much to redeem. Since this type of loyalty program is very new to the market, very limited research has been developed and the efficiency of the program is questionable. By applying goal gradient framework, we've investigated program members' behavior in terms of accumulating and redeeming reward in multi-vender loyalty program to test hypotheses how the goal characteristics influence consumer's inter-accumulating point time. Our key findings indicate consumers accelerate point accrual behavior as they near a goal when their goal size are relatively large. The propensity of goal gradient also occurs when consumers tend to stockpile their point for future usage relatively more. As consumers who have too small goal size may not consider the program relevant, we've performed an additional analysis without those consumers. The results lead to the same conclusions regarding our hypotheses. However, we've further found out that the members' effort increase as they progress toward the goal when they prefer to redeem hedonic reward compared to utilitarian reward.

4 - Incorporating Regularity in Stochastic Repeat-buying Models

Thomas Reutterer, Professor, WU Vienna University of Economics and Business, Welthandelsplatz 1, Vienna, Austria, thomas.reutterer@wu.ac.at, Michael Platzer

Many stochastic `buy-till-you-die' models have been proposed to forecast future purchasing behavior in noncontractual settings. To make predictions of customer defection most of them modify the unobservable dropout process in the customer-base, but share a memoryless timing process of repeat purchases by assuming a negative binomial distribution (NBD) for the transaction counts of active customers. In this contribution, we make a case for adding memory to the timing model for active customers to facilitate spotting customer attrition more accurately in settings with `more regular than random' interpurchase times. We present a model, which replaces the NBD assumption by a flexible version of the condensed NBD model (CNBD-k) for the transaction counts and allows for an arbitrary degree of purchase regularities. Based on an extensive simulation study and using performance evaluations of the proposed model with real-world datasets we can report improvements with respect to both data fit and forecasting accuracy of customers' activity states. Interestingly, these improvements against NBD-type models are achieved even when the assumptions on the dropout process are identical, but by merely accounting for purchase timing regularities.

■ SB10

Room E331

Channels: Structure & Design

Contributed Session

Chair: Ngan Chau, Assistant Professor, University of Nebraska at Kearney, 905 West 25th Street, Kearney, NE, 68849, United States of America, chaunn@unk.edu

1 - Multilateral Bargaining in a Two-Sided Market with Differentiated Products

Wenche Wang, University of Florida, P.O. Box 117140, Gainesville, FL, 32611, United States of America, wangwc121@ufl.edu

Department stores such as Macy's and JCPenney usually carry brands of similar price ranges. While it is profitable for stores to cater to a particular set of consumers, competition among producers may increase due to the lower consumer search cost. This paper attempts to provide a novel explanation to why certain producers would like to sell their products via intermediaries. We suggest that platforms tend to target marginal consumers, i.e., consumers with relatively indifferent preferences towards two differentiated products. In a Hotelling model with two firms located at the end points of a linear market and a platform in the middle, the transportation cost for consumers to purchase directly from the firms is sufficiently high, resulting in no full market coverage. Consumers that shop through the platform incurs a lower transportation cost because of the positive platform attribute. In this model, the platform first chooses an advertising effort level which determines the market area it will serve. Each firm then bargains with the platform sequentially over a fixed entrance fee, and the firms set their direct and platform sales prices after the negotiations. It is found that when the platform attribute is sufficiently high, the first bargaining firm is willing to pay a large fixed entrance fee to strategically drive the other firm out of the platform market. The entrant firm offers a lower direct sales price to its loyal consumers. When the platform attribute is small, both firms enter the platform but neither would conduct price discrimination. Our idea about platform targeting marginal consumers has not been addressed analytically. This paper adds a new strategic implication to the multilateral bargaining two-sided market literature.

2 - Firm Monitoring and Commitment: An Experimental Study

Sung Ham, Assistant Professor, George Washington University, 2201 G. Street NW, Washington, DC, 20052, United States of America, sungham@gwu.edu, Jiabin Wu, Noah Lim

Firm monitoring of agent effort has been shown theoretically to improve performance (i.e. Lal 1990). However, recent empirical tests in behavioral economics (i.e. Dickinson and Villeval 2008), have found that higher monitoring could be detrimental to performance because it crowds out the agent's social preferences. We conduct an experimental test where we allow the firm to use monitoring to reward agents for high effort and penalizing them for low effort. The results show that firms adopt high monitoring systems and reward high agent effort, but only when firms and agents were allowed to communicate intentions to choose these decisions. Hence, our research suggests that in some cases, higher monitoring may not necessarily lead to lower performance.

3 - Buying an Input from a Competitor

Matthew Selove, University of Southern California, 3670 Trousdale Parkway, ACC 306E, Los Angeles, CA, 90089, United States of America, selove@marshall.usc.edu, Anthony Dukes

It is common for a firm to buy a production input from its competitor. For example, Apple and Samsung are the two largest competitors in the smartphone market, and yet Apple's iPhone uses microchips that it buys from Samsung. However, firms often express concern that buying an input from a competitor could give the competitor a strategic advantage in the goods market. In fact, Apple has recently started looking for a new supplier of smartphone chips, citing a concern that purchasing chips from Samsung could make Samsung a stronger competitor in the smartphone market. Motivated by this example, we develop a model in which a firm can buy a production input either from its competitor or from a third party. Buying the input from the competitor softens price competition in the goods market because it allows the competitor to generate profits from the focal firm's sales. When the competitor's marginal costs are low, the focal firm has an especially strong incentive to buy its input from the competitor to soften price competition. As a result, a decrease in the competitor's marginal cost for producing the input leads to an increase in the price the focal firm is willing to pay the competitor for the input. We also extend the model to allow the competitor's marginal costs for producing the input to fall as it moves down a learning curve over two production periods. In this model extension, the focal firm is reluctant to buy its input from the competitor in the first period, because doing so allows the competitor to move further down its learning curve and therefore to extract a higher price for the input in the second period.

4 - Optimal Supply Chain Structure: Impact of Durability

Ngan Chau, Assistant Professor, University of Nebraska at Kearney, 905 West 25th Street, Kearney, NE, 68849, United States of America, chaunn@unk.edu, Ramarao Desiraju, Pradeep Chintagunta

This paper explores the relative optimality of different channel structures in the context of a durable product market. Market saturation and consumers' forward looking behaviors are taken into account in our two-period analytical model. Key insights include identifying the conditions where vertical integration may be preferred to selling through channel partners. Our analysis adds to the analytical literature on channel structures that focuses on a static (one period) setting.

■ SB11

Room E334

Marketing Strategy & Channels

Contributed Session

Chair: Hongyan Shi, Assistant Professor, Nanyang Business School/Nanyang Technological University, 50 Nanyang Ave, BLK S3 B1A-32, Singapore, 639798, Singapore, hyshi@ntu.edu.sg

1 - Servitization under Channel Power Influences – An Agricultural Case

Ming-Chih Tsai, National Chung Hsing University, Dept. of Marketing, 250 KuoKuang Road, Taichung, Taiwan - ROC, mctsai@nchu.edu.tw, Yen-Ting Chen

Servitization enables manufacturer (producer) to span the service value of product in supply chain. As broadly a weak channel power member in supply chain, the success of manufacturer's servitization depends largely on the attitudes of the stronger downstream channel member, e.g. retailer. However, the effect of channel institution on servitization is grossly overlooked. Thus, the aim of study is to extend innovation model to describe channel power influence on the behavior of manufactures' servitization adoption. Agricultural farmers engaging in a Taiwanese national traceability scheme that create value-adding activity are chosen as a case study. A conceptual model that contains eight hypotheses is constructed within which measurements are developed based mainly on the theories of innovation, transaction cost, intellectual capitals. 98 valid farmer samples are collected and reliability and validity of the data are statistically examined. The results from path analysis confirm the significant effects of the reward and expert powers of retailers on the service resources of farmers as well as the development partners, and the resource readiness of farmers may largely affect the innovation attributes and their adoption intention.

2 - Market Orientation or Supply Chain Orientation: Retailer with Traceable Food

Shao Ming Chu, Graduate Student, National Chung Hsing University, Dept. of Marketing, No.250, Guoguang Rd., Taichung City, 402, Taiwan - ROC, gopasy@hotmail.com, Jiana-Fu Wang, Ming-Chih Tsai

Business strategy is greatly driven by market for success. Since 90's, the construct and research proposition of market orientation (MO) have been identified and the impacts of MO are investigated. In the mean time, the concept of supply chain is prevailing and supply chain practice may largely determine the levels of product quality, cost, and supply service. For some innovative goods and service, supply chain even dominates the market development. Recently, the concept of supply chain orientation (SCO) has been raised to complement the market strategy. But the proposition and measurement of SCO still remain unattained. As a result, the study aims to construct a conceptual model evaluating the interrelated effects between MO and SCO. Retailers with traceable foods to increase customer value are used as case study. The model is developed to consist of four hypotheses. Based on the organization theory of supply chain capital, we identify and validate the constructs of SCO. Together, 12 measurements are identified to indicate the antecedents of MO and SCO and 4 quantitative performances indicate the consequence. Data from 25 Taiwanese retailer chains classified into two groups, as supermarket and organic stores considering the different market power, are collected. Canonical correlation analysis is applied to evaluate the effects of MO and SCO, and nonparametric ranking procedure is used for comparison between the two groups. The study result confirms the existent impact from both MO and SCO and clarifies the interrelated effects between two orientations.

3 - Internal Process and Moderated Mediation in Market Orientation (MO): A Conditional Process Modeling

Xiaodan Dong, Assistant Professor, Wagner College, One Campus Road, Staten Island, NY, 10301, United States of America, xiaodan.dong@wagner.edu, Zelin Zhang, Chris Hinsch, Shaoming Zou

In existing studies, MO is modeled as a formative construct. The three components, market intelligence generation, dissemination, and responsiveness have all been considered as the norm to follow. We may risk to lose some nuance information and advocate them all in any circumstances, when MO is simply treated as a composite. Thus, we take a step back and revisit MO by studying its internal process at a disaggregate level. The purpose of this survey study (n=126) is to revisit market orientation by scrutinizing the MO internal relationships between the three dimensions, under organization contextual variables (centralization and international experience). These constructs are not new and the relationships do not sound exciting, but our findings are counterintuitive. First of all, the internal process illustrates that intelligence generation is partially mediated by dissemination to impact responsiveness. More importantly, the contextual variables have different moderation directions on the direct and indirect relationship between intelligence generation and responsiveness. On contrary to conventional studies which believe that MO will be significantly compromised under centralized organization structure, our study shows that intelligence generation will be distressed under centralized structure, only when it is mediated through dissemination. Centralization in the other scenario, where the mediation of dissemination is absent, facilitates a good impact on responsiveness. Meanwhile, the international context riches the story by illustrating that, not always a good addition to the firm, international experience only works when intelligence generation directly impacts responsiveness. Its function is reversed when intelligence dissemination joins in as a mediator. Using the moderated mediation conditional process modeling, our study zooms in MO uncovering the internal relationships of its dimensions, and dissects the different moderation effects on these relationships, which has significantly advanced MO theory.

4 - The Effects of Market Uncertainty on Product Quality in Distribution Channels

Hongyan Shi, Assistant Professor, Nanyang Business School/Nanyang Technological University, 50 Nanyang Ave, BLK S3 B1A-32, Singapore, 639798, Singapore, hyshi@ntu.edu.sg, Nicholas Petruzzi, Yan Liu, Qin Geng

In this paper, we study a manufacturer's optimal quality provision in different distribution channels in a market where consumers are vertically heterogeneous and the market size is uncertain. We develop a game-theoretic model to incorporate the market features and get a few interesting findings. We show that, market size uncertainty generates a quality-increasing effect of decentralization, opposed to the more standard quality-decreasing effect of decentralization. We also find that, market size uncertainty by and large prevails over consumer homogenization as the predominate force affecting the manufacturer's quality provision under decentralization, and that this predominance generally prevails both under uniform and non-uniform characterizations of consumer homogenization and under a broad class of distributions defined to characterize market size uncertainty.

■ SB12

Room W300

Retailing: Location

Contributed Session

Chair: Amalesh Sharma, Doctoral Student, Georgia State University, 35 Broad Street, Atlanta, GA, 30303, United States of America, asharma14@student.gsu.edu

1 - Why Outlet Stores Exist: Extending Markets While Reducing Cannibalization

Donald Ngwe, Columbia University, 420 W 118th Street, New York, NY, 10027, United States of America, dkn2106@columbia.edu

Many firms sell goods through outlet stores in addition to primary stores, particularly in the fashion industry. Outlet stores offer attractive pricing and are usually located far from central shopping districts. The main perspectives as to why outlet stores exist can be broadly classified into inventory management, geographic segmentation, and price discrimination through consumer self-selection. I evaluate these hypotheses in the context of a major fashion goods firm using newly available and highly granular data. Model-free evidence suggests that inventory management and geographic segmentation are not the main drivers for outlet store use. Consumers who shop at outlet stores also do not differ significantly from those who shop at primary stores in terms of income. I use a structural demand model to show that consumers are heterogeneous mainly in their sensitivity to travel distance and taste for product newness. I then develop a supply model to predict product development responses to changes in store locations. Through policy simulations, I find that the firm uses outlet stores to serve lower-value consumers, who self-select by traveling to outlet stores from central shopping districts. The firm stocks outlet stores with older merchandise to prevent cannibalization of primary store revenues by means of exploiting the positive correlation between consumers' travel sensitivity and taste for new products. I find that the rate of product introduction in primary stores would fall by 13% if outlet stores were closed down, while profits would decline by 19%.

2 - Prescriptive Analytics for Retail Network Optimization using Extended Huff Models

Matthias De Beule, PhD Candidate, Ghent University, Tweekerkenstraat 2, Gent, Belgium, matthias.debeule@ugent.be, Nico Van de Weghe, Dirk Van den Poel

This study proposes a prescriptive analytics system based on a modified Huff model that takes directly into account spatial competition between stores of the same brand, brand attraction based on actual brand performance and spatially variable substitution. The model uses only publicly available or easily acquirable data as input, whereas model output is extensively validated on various levels. These levels include comparison of modeled and real market shares on block, store and brand level for the Belgian food market. Results show that multi-objective optimization of model parameters yields comparable results on block level to other models in the literature but improved results on store and brand levels, thereby ensuring model robustness. This robustness also enables the application of the model for various business purposes as store location determination, least distribution optimization, store and store concept benchmarking, without loss of spatial generality.

3 - Consumer's Product Return and Resale and Retailer-hosted-Resale Outlet

Byong-Duk Rhee, Professor, Ajou University, Worldcup-ro 206, Yeongtong-gu, Suwon, 443-749, Korea, Republic of, brhee@ajou.ac.kr, Chang Hwan Lee

This study addresses the issues related to consumer disposition of product. After purchasing a product, a consumer may consume the product until the end of its life. On the other hand, the consumer may dispose it permanently if s/he finds that the product is not exactly what s/he wants. There are two ways of product disposition. First, the consumer can return the product right away in "like-new" condition for refund to the retailer at which s/he purchases the product. Alternatively, the consumer can sell the product in "used" condition after the partial consumption at the general used-product market. We assume that consumers have perfect foresight and consider these possibilities of product consumption and disposition when making the initial purchase decisions. We further assume that consumers are ex-ante identical and are uncertain about the exact value that they would gain from the consumption. Consumers know the exact value only after they purchase and inspect the product. Given these assumptions of consumers and their purchase behavior, we investigate the manufacturer's and retailer's refund policies, pricing, and order quantity decisions. In addition, we consider a new retail expansion, Retailer-Hosted-Resale outlet: a retailer gets the product back from their customers and resells the used ones at the store. In the presence of a Retailer-Hosted-Resale outlet, we examine the retailer's buyback and resale prices of the used product, and its impact on their refund policies. We also show that the manufacturer, as well as the retailer, is always better off with the resale outlet.

4 - Do Product Forms and Marketing Mix Elements Evolve in Emerging Markets?

Amalesh Sharma, Doctoral Student, Georgia State University, 35 Broad Street, Atlanta, GA, 30303, United States of America, asharma14@student.gsu.edu, V Kumar, Sarang Sunder

Emerging markets offer ample opportunities for growth and are a hotbed for direct investment in retailing. However, they also pose several challenges due to their largely unorganized and unstructured retail distribution setup. The problem is further compounded by the lack of visibility (in the form of data) for managers in order to make educated decisions on the allocation of retail distribution resources across various store formats (since some formats could be more effective than others). Finally, given the volatility inherent to emerging markets, the above effects are likely to be dynamic rather than static. Empirical work in the emerging market literature, though scarce, has only considered static effects of the marketing mix while ignoring time-varying effects of distribution formats. In this study, we attempt to address this gap by proposing a Time-Varying Effect Model (TVEM) to investigate the dynamic effects of distribution levels across store formats on sales, while accounting for endogeneity of the marketing mix. Additionally, we allow for brand-level heterogeneity within the framework through a random effects specification. The proposed model is implemented on five years of data obtained from a large Consumer Packaged Goods (CPG) manufacturer operating in an emerging market. In our analysis, we showcase the benefits of our proposed dynamic approach over the conventional static approach to understand the marketing mix. Our findings suggest that practitioners need to not only quantify the dynamic effects of various retail distribution formats but also monitor the effectiveness of specific store formats over time and devise distribution strategies accordingly.

■ SB13

Room W330

Game Theory: Pricing & Promotions

Contributed Session

Chair: Richard Schaefer, University of Texas at Austin, McCombs School of Business, Austin, TX, 78712, United States of America, Richard.Schaefer@phd.mccombs.utexas.edu

1 - A Game-theoretic Model for Co-promotions: Choosing a Complementary Versus an Independent Product Ally

Salma Karray, University of Ontario, Institute of Technology, 2000 Simcoe Street North, Oshawa, ON, Canada, salma.karray@uoit.ca, Simon-Pierre Sigue

This research studies promotional alliances (co-promotions) and identifies the optimal choice of a promotional partner. We consider a market formed by three firms; two firms offer complementary products, and the third firm sells an independent product. A game-theoretic model is developed and solved to obtain Nash equilibrium pricing and promotional decisions for different games where promotional alliances are formed between firms having complementary and independent products. We then compare equilibrium solutions obtained from the different games and identify conditions under which each type of product (complementary or independent) would be the optimal choice as a promotional ally. Results show that these conditions depend on various parameters, mainly the degree of product complementarity, the effectiveness of individual promotion, the effectiveness of joint promotion, and the base demand for each product. Commonly, it is optimal to choose a co-promotion with the independent product when the price effect of the complementary product is large, while partnership with the complementary product is more appealing when the effect of individual promotion is large enough. The product with the larger base demand would be preferred in most cases, regardless of whether it is complementary or independent.

2 - Timing of Trades, Welfare, and Price Dispersion

Yuichiro Kamada, University of California, Berkeley, Haas School of Business, 545 Student Service Building #1900, Berkeley, CA, 94720-1900, United States of America, y.cam.24@gmail.com, Ryota Iijima

This paper studies a trading market in which traders are not always active. The leading examples are online trade markets on BBS in which buyers only periodically check whether there have been offers from potential sellers. Such frictions may be caused by opportunity costs, bounded cognitive skills, or information acquisition costs. We construct a search market model with such traders. We show that our model has a unique stationary equilibrium, and derive three key implications. First, there exists price dispersion in equilibrium, which is consistent with the robust empirical regularity. Second, the equilibrium welfare of traders is non-monotonic in the degree of frictions. Third, the equilibrium price range becomes proportional to the social welfare loss as the discount rate vanishes. The last finding provides a new rationale for the use of price ranges as a measure of price dispersion in the empirical literature.Using a unique disaggregate level panel dataset of users' contributions and social tie formation in an online music blog aggregator, we seek to examine the effect of social influence due to different types of ties, reciprocated, follower and followee ties?and the moderating role of network characteristics (as captured by tie strength and structural embeddedness) on users' online contribution behavior. Our econometric modeling approach accounts for various factors that can confound with social contagion and includes several robustness checks. We find a positive effect of social influence on users' contribution behavior. We find that the social influence effect is asymmetric across the different types of ties and that the effect is moderated by both tie strength and structural embeddedness among network ties. We substantiate our findings by adopting a quasi-experimental approach based on propensity score matching. We discuss the theoretical and the managerial implications of our results in the study.

3 - Pricing Self-improvement for Impulsive Consumers

Richard Schaefer, University of Texas at Austin, McCombs School of Business, Austin, TX, 78712, United States of America, Richard.Schaefer@phd.mccombs.utexas.edu, Raghunath Rao, Vijay Mahajan

How does a firm market a self-improvement program when consumers periodically prefer instant gratification? We construct an analytical model wherein a consumer's degree of time consistency fluctuates over time: she persuades herself to enroll in a program when relatively forward-looking, but her continued success requires that she endure periods of impulsivity. Our model yields many interesting and significant insights. First, we demonstrate the wide range of pricing policies observed for self-improvement programs. We find that firms charge larger upfront fees when consumers possess high planning-stage motivation, but impose higher per-usage rates when participants better withstand their impulses. Second, we demonstrate that quality improvement may encourage program enrollment, but decrease implementation likelihood during impulsive periods. Finally, we examine the process by which consumers learn of their impulse severity and show that firms may use certain pricing policies to slow this process.

Saturday, 1:00pm - 2:30pm

■ SC01

Room E130 (Aud.)

New Products Strategy and Performance

Contributed Session

Chair: Wonjoo Yun, Doctoral Student, Texas A&M University, 4112 TAMU #240E, College Station, TX, 77843, United States of America, wjyun@mays.tamu.edu

1 - The Effects of Financial Performance on Key Components of Firms' New Product Development Strategies

Xinchun Wang, Texas Tech University, 703 Flint Avenue, Mail Stop 2101, Lubbock, TX, 79409-2101, United States of America, xinchun.wang@ttu.edu, Christine Shropshire, Mayukh Dass, Dennis B. Arnett

Extant literature focuses mainly on the positive relationship between new product success and firms' financial performance. These studies have identified R&D expenditure, number of patents filed, and product launch activities as key predictors of firms' financial performance. However, after financial performances are announced relative to the analysts' expectations, firms react and adjust their resources in an attempt to experience more favorable financial performance in future. This study explores such post performance adjustments on specific components of a firm's new product development strategy. In particular, we investigate three research questions (1) how does financial performance, relative to the analysts' expectations, affect the key components of firms' new product development strategy, (2) how do firm characteristics such as firm size, present sales and firm resources affect this relationship, and (3) how does organizational structure such as firms' governing board composition moderate the above relationships. We collect multi-year data from a sample of S&P 500 companies from multiple sources, including IBES, COMPUSTAT and news dashboards to examine the above questions. We conclude the paper with managerial implications, and insights for new product development strategists.

2 - Diminishing Returns to New Product Announcements: How the Past Shapes Investors' Expectations

Nooshin Lotfi, PhD Student, Texas A&M University, 220H Wehner Building, 4112 TAMU, College Station, TX, 77843-4112, United States of America, nlotfi@mays.tamu.edu, Alina Sorescu

Research shows that innovation increases the market value of firms. However, as firms' innovation activity increases so do investors' expectations of firms' future innovative output. These expectations should result in an ex-ante upward adjustment in stock prices and a smaller ex-post reaction when actual new product introductions occur. Using a sample of 9,776 new product announcements made by 1,600 publicly traded US firms we show that the magnitude of the stock market reaction to a new product announcement is negatively related to a set of firm and market characteristics measured over six, respectively twelve months prior to the announcement: (1) the number of new product announcements recently made by the firm; (2) the number of new product announcements recently made by the firm's competitors; (3) the extent to which the firm has exceeded investor expectations with previous new product announcements; and (4) the investor sentiment towards the recent corporate actions undertaken by the firm. Furthermore, we verify that firms' past history of new product announcements is incorporated in their market value measured prior to each new announcement. While our results suggest that managers cannot outrun themselves in the innovation race, insights from our research can help them select and time new product announcements in a manner that increases the impact that these announcements have on the stock prices of firms.

3 - The Impact of New Product Characteristics on Equity Offering Values and Firm Performance

Zixia Cao, West Texas A&M University, Canyon, TX, 79015, United States of America, czixia@gmail.com, Reo Song

Information on new products is essential for investors to evaluate firms' equity offering. Existing studies have examined the effects of marketing spending on IPO performance and the effect of technological innovations on firm performance, but have not looked at other aspects of non-technological products such as the number and innovativeness of new products, and the percentage of new products introduced into foreign markets. Using a dataset of packaged food products manufactured by firms that issued equities at initial public offerings (IPOs) and first-time seasoned equity offerings (SEOs) from 1980 to 2012, we study the impact of new product characteristics before equity offerings on the firms' equity offering values. We further explore how firms change their new product characteristics after equity offerings and how those changes affect the firms' market value. We find that innovativeness of new products, the number of new products, and the percentage of new products introduced into foreign markets have positive effects on firm's equity offering performance measured by Tobin's Q. In addition, we find that following equity offerings, on average, the number of new products increases greatly, but the innovativeness of new products increases only slightly. Increasing the number of new products leads to a greater firm value after the offering, but surprisingly, increasing the innovativeness of new products has a negative impact on firm value after equity offering.

4 - New Product Preannouncement and Shareholder Value: The Roles of Product Recall and Advertising

Wonjoo Yun, Doctoral Student, Texas A&M University, 4112 TAMU #240E, College Station, TX, 77843, United States of America, wjyun@mays.tamu.edu, Venkatesh Shankar, Yan Liu

Companies invest heavily in innovation to introduce new products to the market. Although prior research suggest that the stock market reacts positively to announcements and preannouncements of new products, it is unclear if this true in markets characterized by frequent product recalls. In this study, the authors focus on the determinants of the effect of new product preannouncements on short-term shareholder value in such markets. They propose a conceptual model and empirically analyze a sample of 247 automobile new product preannouncements over a 13-year period (1997-2009). The findings indicate that product recalls reduce the significant short-term abnormal financial returns from new product preannouncements. The results, however, show that the innovativeness of new products can mitigate the negative impact of product recalls on the short-term abnormal returns to new product announcements. Furthermore, advertising spending during product recalls can attenuate the negative effects of product recall volume on short-term firm value to new product announcements. The findings offer managers clear guidelines on when to preannounce new products and on how to manage the communication and advertising amid product recalls to realize greater financial value from the new product announcements.

■ SC02

Room E208

Business Marketing; Business Models

Contributed Session

Chair: Ryan Choi, PhD Candidate, University of California, Irvine, Irvine, CA, 92697, United States of America, jihungc@uci.edu

1 - Exogenous Shocks and Relational Contracts

Darcy Fudge Kamal, Chapman University, 1 University Dr., Argyros School of Business and Economics, Orange, CA, 92866, United States of America, kamal@chapman.edu, Cristina Nistor

We study how repeated buyer-supplier relationships in the Thoroughbred horse industry are affected by exogenous shocks to demand. Theory predicts that such shocks could either cause relationships to break down or, to the contrary, strengthen ties between existing partners. We analyze this problem empirically using a large longitudinal dataset containing details of relationships between Thoroughbred stud farms and nurseries that spans six years of detailed transactions. Based on industry field work conducted in 2010, we provide insights into how the exchange relationships were affected by the economic downturn in 2008 and how changes in demand for horses shaped existing relational contracts in the horse breeding industry.

2 - Fuel Surcharge Pricing

Ryan Choi, PhD Candidate, University of California, Irvine, Irvine, CA, 92697, United States of America, jihungc@uci.edu

This paper studies a business-to-business (B2B) contract between truck carriers (sellers) and shippers (customers). With the increase in the price of oil, fuel surcharges are now widely used in the transportation industry. However, there is suspicion that truck carriers use fuel surcharges to make profits above and beyond the cost of fuel. The purpose of this paper is to apply economic theory to investigate whether freight carriers find it optimal to offer fuel surcharges to supplement their net transportation cost (freight rate) and to answer why imposing fuel surcharges, instead of raising the freight rate, is an alternative or even better option. We analyze how well the formula for fuel surcharges widely used in the transportation industry mirrors truck carriers' fuel cost changes. The analysis shows that, under certain conditions, fuel surcharges increase faster than changes in base rates (trigger point) and suggests that fuel surcharges are one way to stop the shippers to choose less demand, especially for those who are more risk-averse. In addition, when there are multiple shippers, the lower type one will bear the burden more from the risk of the fuel price uncertainty.

3 - Business Model: A Marketing Perspective

Lin Jia, VU University Amsterdam, De Boelelaan 1105, FEWEB, Department of Marketing, Amsterdam, 1081HV, Netherlands, l.jia@vu.nl, Alina Sorescu, Ruud Frambach

In today's competitive marketplace technological innovation is no longer a guaranteed driver of sustainable competitive advantage. Profits are more likely to arise from a well-designed business model, rather than from any individual corporate action. Despite widespread practitioner interest and attention from management and information systems researchers, business models have been largely ignored in the marketing literature. Yet the main pillars of business models are central constructs in marketing research and practice. We conceptualize the notion of business model around firms' value proposition and we propose a conceptual framework that explicates how value creation, appropriation, and delivery work in concert to shape up the value proposition, as well as the manner in which firms derive rents from it. The paper clarifies how marketing assets and actions have direct implications in how business models are designed and updated. Finally, we propose a series of research propositions on the consequences for marketers of thinking at the more aggregated level of the business model rather than that of its individual components.

■ SC03

Room E204

Brand: Extensions & Architecture

Contributed Session

Chair: Arnab Ray, FPM Scholar, IIM Lucknow, Indian Institute of Management, Lucknow, Prabandh Nagar, Off Sitapur Road, Lucknow, 226013, India, fpm12003@iiml.ac.in

1 - Celebrity Endorsements and Branding Strategies: Event Study from India

Saravana Jaikumar, Indian Institute of Management Ahmedabad, FPM House 11, IIM Old Campus, Vastrapur, Ahmedabad, GU, 380015, India, saravanal@iimahd.ernet.in, Arvind Sahay

We study the economic value of celebrity endorsements to Indian firms based on their branding strategy – corporate or house of brands. Many studies have highlighted the economies of scale benefits in advertising costs to firms following corporate branding strategy. However the differences in the effectiveness of celebrity endorsements (which might form a significant part of advertising costs) to firms following different branding strategies have been unexplored. Standard event study methodology is used to evaluate the economic value of endorsements under different branding strategies. A total of 47 endorsement announcements were analyzed (25 corporate brands and 22 house of brands). The abnormal returns were subjected to both parametric and non-parametric tests. Furthermore data on brand personality scale (for the celebrities and brands) is used to assess the level of congruence between the brands and celebrities. The impact of this level of congruence on abnormal returns is also examined. Event study results indicate significant positive abnormal returns for corporate brands. However for house of brands the abnormal returns from celebrity endorsements are insignificant. This study supports the notion that increased advertising costs associated with the endorsement deals even the benefits in the case of house of brands. The significant abnormal returns recorded for the corporate brands likely reflect the better communication to shareholders and the economies of scale in the advertising costs. Moreover the level of congruence is found to have insignificant effect on endorsement announcement returns. The findings have significant implications to marketers.

2 - Firm Reputation as Liability – Product Reputation as Asset

Kashef Majid, University of Mary Washington, 1301 College Ave., Fredericksburg, VA, 22401, United States of America, kmajid@umw.edu, Mooweon Rhee

Products in the marketplace are associated with no less than two reputations, the reputation of the firm that produced the product and the reputation of the product itself. Toyota is widely regarded as a reputable firm that manufactures vehicles such as the Prius and the Camry – but these products themselves contain unique reputations which may differ from that of the firm. A positive reputation has been argued to be an asset for a firm because it signals quality and stimulates demand (Kirmani and Rao 2000). However, a positive reputation can also be a liability because it creates expectations in the minds of consumers and when these expectations are violated, such as in a product recall, these positive expectations harm the firm (Rhee and Haunschild 2006). Reconciling these two opposing views is important because, as our results demonstrate, new products are more likely to contain flaws than their established counterparts. In a market where new products must compete for market share and recognition amongst established competitors, these products often suffer from errors in their design or manufacturing that are only revealed after the product has spent time in the marketplace. Hence, the reputation of the firm and or the product may damage a growing market for the new product. Using the North American automotive industry as our context we investigate the relationship between product and firm reputation on the market response to a product recall. Our findings indicate that the reputation of the product and the reputation of the firm have differing impacts on the market response to a product recall. Using an analysis at multiple levels (recall and firm) we demonstrate that a positive firm reputation may harm market share early on; however, the strength of the product reputation counters these effects over time.

3 - Diagnosing Sequential Brand Extensions through Metrics of Comparing Brand Concept Maps

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This study aims to diagnose the effects of brand sequential extensions through the comparisons of three brand concept maps among the parent brand, its intervening extension brand and its subsequent brand. By combining the methodology of brand concept map developed by John, Loken, Kim, and Monga (2006), the brand association metrics of brand extension effects developed by Huang and Pan (2012), and the brand association network value proposed by Schnittka, Sattler & Zenker (2012), the author empirically examined the performance of brand sequential extensions. Two cases illustrated this examination tasks, i.e., the sequential brand extensions from agnes b, sports b to agnes b café, and the one from Apple iPod, Apple iPhone to Apple iPad, respectively. The results have shown that for agnes b case, the subsequent brand (i.e. agnes b café) has backward reciprocal spillover effects both to its intervening and parent brands, and the intervening extension brand has backward and forward spillover effects. Interestingly, the associations of brand bag and brand accessory play critical roles when this brand extended to different product category. For Apple case, the core brand associations, including Apple Company, Steve Jobs, brand logo, ease of use, convenient, and premium pricing, dominate the formation of brand concept and can enlarge its brand breadth. Both of the two cases indicates that brand logo associations can be taken as the key brand components of assuring the brand sequential extensions success and increasing brand malleability, no matter in the extension to similar or non-similar product category.

4 - Mediating Role of Self in Brand-choice Decision: A Conceptual Framework with Research Propositions

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Extant research on consumer behavior proposes the role of consumer self-concept assuming great significance in branding of consumer products as it would take into account the internal dynamics of self-organization as well as social cognition (Bagozzi, 2006; Grubb and Grathwohl, 1967; Reed, 2002; Sirgy, 1982). However, the much needed empirical evidence is observed to be somewhat missing in this direction. In order to address this critical research gap, we conducted an exploratory study by investigating the impact of self-concept on brand choice decision. The notion of self-concept has been defined for the present study as the internal organization and processing of self related schemas that a person holds about oneself (Markus and Nurius, 1986). The literature survey pursued by us had an established focus on three theories, viz. theory of self-expansion, attachment theory, and information processing theory. The research variables emanated out of these theories include: brand attachment, brand attitude, consumer involvement, self-concept, goal-directed behavior, approach-avoidance behavior, and brand choice, which had resulted in a conceptual framework that accommodated seven research propositions. In all, while trying to establish the mediating role of self-concept in brand choice decision, we could explain: (i) how the brand attitude complements the attachment oriented consumer behavior in brand choice decision; (ii) how the consumer perceptions of 'brand as an expansion of the self' bring him to form close relationship(s) with a brand; and (iii) how the consumers' goal directed behavior and approach avoidance behavior influence the relationship between consumer's self and his brand choice decision.

■ SC04

Room E201

e-WoM and Online Reviews

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Judy Ma, Rensselaer Polytechnic Institute, 110 8th Street, Troy, NY, 12180, United States of America, maj7@rpi.edu

1 - Multi-channel Model of Advertising: Incorporating Electronic Word-of-mouth into Advertising Model

Yana Ponomarova, PhD Candidate, ESSEC Business School, 65, Rue St Maur, Paris, 75011, France, yana.ponomarova@essec.edu, Nicolas Glady

Today consumers decision journey has become a multi-channel and multi-stage process. Attempting to influence consumer's brand consideration set, marketing managers are using an increasing variety of media vehicles for advertising. Such expansion is intensified by social web technologies and consumer-generated content that provide marketers with alternative advertising instruments. The current research uses an extended version of an integrated utility-maximizing framework and investigates the effect of electronic word-of-mouth (eWOM) on category purchase incidence, brand choice and purchase quantity decisions. This study addresses eWOM as a special type of social media and contrasts it with traditional channels of awareness-raising. An empirical model based on Hierarchical Bayes methodology accounts for consumer heterogeneity and as a result, provides marketing managers with suggestions for multi-channel advertising strategies. Specifically, the empirical results suggest that eWOM in social media significantly increases offline sales, and, in some cases, constitutes a more important driver of sales than above-the-line advertising, Furthermore, the study reveals a significant cross-media synergy effect, as well as a small cross-media cannibalization effect for a part of the population.

2 - Identification of Influencers: The Case of Cooking Bloggers

Damien Renard, Institut Mines Télécom, Telecom École de Management, 9 Rue Charles Fourier, Evry, 91000, France, damien.renard@telecom-em.eu, Christine Balague

Cooking has been transformed from closed cooking limited to culinary enthusiasts to cooking characterized by socially connected online activity. Today, cooks can share their culinary secrets and achievements and provide advice, with digital technologies creating a new pattern based on individual contribution. Despite all these evolutions, the influence process within virtual cooking communities is still not yet extensively studied by academics. We therefore address the following important research question: who are the influential bloggers in cooking blogosphere? The study aims to better understand contributory behaviors and the role of the community as an explanatory factor in individual actions. We build a model to observe the influence process, from the analysis of blogger's role in his virtual community until his ability to change the beliefs of users on social networks. The main contribution is to reconsider the influence process. We highlight a first level of influence according to the interaction among the blogs, which refers to the number of outgoing and incoming links between blogs. We add a second level by adding a composition variable that individually describes each blog in terms of the types of recipes it contains. Finally, we analyze the last step of influence process by studying their presence on social networks. For this study, we propose a quantitative measure of the influence process using a dataset that includes all cooking blog activity over the course of one year. More precisely, 46 312 posts were collected and classified through a textual analysis. From the quantitative analysis of 952 blogs, we show that blogger's role in his virtual community determines his own activity of publications but also his influence on social networks.

3 - Inside Look at Emerging Market Consumers: Online Chat Rooms in China and Russia

Cecile K. Cho, Assistant Professor, Sungkyunkwan University, 25-2 Sungkyunkwan-ro, Jongno-gu, Seoul, Korea, Republic of, chocecile@gmail.com

In this research, we explore the minds of the consumers for automobiles in the key emerging market — China and Russia. By analyzing the content of information posted in internet forums, we seek to look beyond the singular market perspective to consider differences in consumer preferences according to their geographic location. Findings suggest that there are real differences between the better developed coastal cities versus the less developed inland regions, as well as common concern with meeting functional needs. Methodologically, we content analyze postings from automobile chat rooms over a 12-month period, 2010-2011, using a text analysis software. We first examine the frequency and composition of the content, namely, frequency of word types used, along the dimensions of hedonic/utilitarian, positive/negative affect, future/present, approach/avoidance, and other constructs. We also use the online content to generate graphic renditions of the top-of-mind associative network to examine the proposed regional differences in preference for compact cars in the two markets (Netzer, Feldman, Goldenberg and Fresko 2012). By using consumer-generated data posted on the Web, it is possible to gain an unobtrusive look inside the minds of the consumers – an approach that promises to be especially fruitful for understanding emerging market consumers. This research contributes to understanding the motivational differences that manifest in evaluating a car in the fast growing, yet under researched emerging markets of China and Russia.

4 - Does Sunshine Put Products in a Better Light? The Impact of Weather on Consumer Reviews

Judy Ma, Rensselaer Polytechnic Institute, 110 8th Street, Troy, NY, 12180, United States of America, maj7@rpi.edu, Dongling Huang

Technological advancements have allowed marketers to use more direct advertising outlets, such as mobile advertising, that are targeted to facilitate consumer purchases and feedback in the near future. With regard to the relatively new and emerging forms of direct advertising, an important yet under-studied issue is how firms should time their advertising messages (e.g., mobile advertisements) with respect to situational factors in order to maximize the positivity of consumers' experiences. In this study, we examine how consumer satisfaction of evaluation of products or services is impacted by a certain type of situational factor: the weather. We empirically examine the impact of weather on consumer reviews and find that the positivity of consumer reviews is indeed impacted by the weather conditions that the consumer experiences. We offer discussion for how our results can be useful to companies that solicit product reviews, such as Amazon.com and retailers with online shopping portals. Our findings offer guidance regarding when such companies should solicit reviews for their products or services from consumers with respect to weather.

■ SC05

Room E231

Brand Image & Communications

Contributed Session

Chair: David Huh, PhD Candidate, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27514, United States of America, dsh@unc.edu

1 - When is the CEO Effective as a Spokesperson in a Product Harm Crisis?

Tony Garrett, Associate Professor, Korea University Business School, Anam-Dong, Seongbuk-Gu, Seoul, 136-701, Korea, Republic of, tgarrett@korea.ac.kr, Daniel Laufer

In a product-harm crisis the corporate message is not the only issue facing the company. The choice of the right communicator can have important implications which can help a company minimize the damage resulting from a crisis. In this paper we examine the under researched role of the spokesperson. We focus on the effectiveness of the CEO as a spokesperson during a product-harm crisis. Two studies were conducted and in the first study we find that during an ambiguous product-harm crisis, when there is uncertainty regarding culpability, the CEO spokesperson functions as an important extrinsic cue to blame for consumers, and helps the company. This is manifested through lower relative blame attributed to the company and higher future purchase intentions. In the second study, we find that in a product-harm crisis where it is clear that the company is to blame and the product is defective, the CEO as a spokesperson is helpful only when consumers have high levels of power distance. This was reflected through higher levels of brand trust and higher future purchase intentions. Our findings have two key theoretical contributions. First, our research suggests that the CEO spokesperson is an important additional extrinsic cue to blame for an ambiguous product harm crisis. Second, we add to the list of individual differences that impact the effectiveness of corporate responses to a crisis. Other managerial implications are discussed in the paper.

2 - The Dynamic Impact of Crises on Brand Image

Max Backhaus, PhD Student, University of Cologne, Albertus-Magnus-Platz, Cologne, 50923, Germany, backhaus@wiso.uni-koeln.de, Marc Fischer

Companies invest heavily in building up brands. Brand crises (e.g., product-harm crises, environmental scandals) may severely harm the trust and confidence consumers place in brands. Hence, tediously and carefully established brand equity can suffer severely during crises. Although academic literature supports a general impact of crises on brands, consumer purchase behavior, and firm performance variables, so far two aspects have largely been ignored: (1) different types of crises may have different immediate effects and (2) effects may also differ with respect to their persistence. We conduct a systematic investigation of the dynamic crisis impact on consumer-based brand image based on a unique dataset of 214 crisis events across 12 industries, 69 brands, and 5 years of weekly data. By using an ECM model, we apply a two-stage approach in order to (1) estimate the short- and long-term impact of crisis events on brand image and (2) analyze drivers (crisis characteristics vs. firm characteristics) that explain differences in the short- and long-term effects. Our results show that the overall impact is mainly driven by the type of the crisis (product-crises vs. behavioral-related crises) and its media coverage. Furthermore, taking the blame for a crisis hurts brand image significantly in the longrun. These findings help better forecast brands' image drop when facing crisis events and give guidance to marketing managers to appropriatly react dynamically (adjust short-term and long-term actions) in response to a crisis.

3 - How Products Can Achieve Timeless Value

Robert Kreuzbauer, Assistant Professor, Nanyang Business School, Nanyang Avenue; S3-B2C-104, Singapore, 639798, Singapore, rkreuzbauer@ntu.edu.sg

When does a product have timeless value? Existing psychological and economic theories of valuation are unable to explain this form of valuation, which has its origin in design and art theory. According to Viennese architect and design theoretician Adolf Loos (1908) timeless value describes an object's ability to maintain its perceived value over time, despite technological, societal, or cultural changes. In lay-terms it refers to products that would typically be labeled as 'a classic' or a 'psychological heirloom' such as the Ford Mustang 1967 or a Rolex Daytona wristwatch. We provide a theoretical fundament for the construct of timeless value and test it in a series of empirical studies. The results demonstrate that products of timeless value are perceived as representing important cultural/societal moments and that the product maintains its perceived value despite changes in fashions, style, trends or technology. We also show that timeless value can be distinguished from economic exchange value (i.e. whether a product is supposed to have high re-sell value or is a good investment) and perceived usefulness (i.e. whether a product is a suitable means to satisfy a particular need). The construct of perceived value is of particular importance for premium and luxury goods as a possible predictor of brand value (i.e. for a brand to maintain its luxury or premium image it is important that its products would maintain its value over time).

4 - Is Honesty the Best Policy? Understanding the Double-edged Effects of Sharing Negative Information

David Huh, PhD Candidate, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27514, United States of America, dsh@unc.edu, William Putsis

The "conventional wisdom1" of the market that any negative information about a product should not be revealed has been challenged both in the academia and in practice; the academic marketing literature has provided some insights about the positive impact of sharing negative information by focusing on seller's trustworthiness or credibility. However, by only considering the perception of sellers, the literature has not been able to provide sufficient explanation regarding the circumstances whereby sharing negative information can enhance both seller's profitability and customer welfare. This paper tries to fill this gap by focusing on customers' perceived risk of the product and provides both theoretical explanations and empirical observations on the comprehensive effect of sharing negative information. Our analytic model, which factors in perceived risk, reservation price, and risk propensities of customers, along with the information search cost, suggests that sharing negative information can increase demand with decreased perceived risk, and that the increase is even bigger with higher information search cost. The subsequent analysis of both sales data of 456 collectible baseball cards and 238 collectible coins and the market experiments of used car sales with 350 subjects have validated the findings of the analytic model and demonstrated that sharing negative information actually increases demand with reduced perceived risk, and that this positive effect is even larger with credence attributes. The results of this paper not only bridge the gap in the literature but also provide some practical guidelines to marketing managers in terms of how they should communicate negative information with customers.

■ SC06

Room E234

Digital Marketing and Keyword Bidding

Cluster: Internet and Interactive Marketing

Invited Session

Chair: Woochoel Shin, Assistant Professor of Marketing, University of Florida, P.O. Box 117155, Gainesville, FL, 32611, United States of America, wshin@ufl.edu

1 - The Mobile Platform

Jei Young Lee, PhD Student, State University of New York at Buffalo, School of Management, Buffalo, NY, United States of America, jeilee@buffalo.edu, Minakshi Trivedi, Jeonghye Choi

Recent years have seen an explosive growth in the number of mobile devices like smart phones. Users topped 1 billion worldwide in 2012 and according to Strategy Analytics (2012), are poised to top 2 billion by 2015. The ubiquity of this platform draws from two phenomenon: first, the mobile platform provides an instant gateway to functionalities ranging from checking your email to staying in touch with friends to making purchases. Second, the extreme portability of this device ensures its accessibility 24 hours a day. We look into both these aspects of mobile platforms by first categorizing the thousands of sites/apps accessed by their functionality and then studying the drivers of usage in these categories. Is it merely individual preferences for these categories that drive usage or do other factors such as time availability and psychographics such as personality traits also play a role? Secondly, since much of the usage is while traveling between destinations (and we have access to such locational information), is there a difference in usage behavior when users are stationary as opposed to when traveling? Using a unique data set consisting of transactional mobile log data, locational data as well as individual level survey data, we offer an econometric model incorporating consumer and category characteristics as well as locational and seasonality data. We expect this information to be invaluable to retailers and service providers looking to promote app usage and loyalty.

2 - The Effects of Supply Limits and "Sold Out" Messages on the Success of Daily Deals

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Daily deal websites first launched a decade ago as a promising means for small businesses to attract new customers. Despite mixed empirical findings about the long term profitability of such websites, researchers have built plenty of theoretic models of revenue and number of deals sold using explanatory variables such as ratings and reviews, which signal to consumers the quality of the product and thus reduce the uncertainty of purchase. However, there is another important signal which has not yet been thoroughly studied: "sold out" messages. Our research involves developing and testing a theoretical model to verify whether it is an optimal strategy to display "sold out" information before the deal ends. Based on data from a Chinese daily deal website, we find evidence of the strategic use of supply limits and "sold out" messages and significant differences between deals with and without "sold out" messages. Interestingly, the deals include both new and well-established brands, allowing us to check the influence of "sold out" messages under conditions of high and low product uncertainty. Our paper sheds light on online promotions which are also able to adopt "sold out" strategy to stimulate the sales. We show that the directional effects of "sold out" messages on revenues and number of deals sold differ across industries and brands.

3 - Strategic Keyword Management in Sponsored Search Advertising

Alex Kim, Long Island University, 720 Northern Blvd., Brookville, NY, 11548, United States of America, alex.kim@liu.edu, Axel Stock

Sponsored search advertising refers to advertising listings that appear alongside organic search results when consumers search keywords on a search engine. Unlike organic results, which are decided by the relevancy to the keyword, the prominence of search advertising is decided by advertisers' bids in the search advertising auction. In practice, advertisers participate in the auctions for a set of multiple keywords, rather than for a single one, to maximize the effectiveness of advertising. The question of how a firm should optimally manage multiple keywords, which differ in their quality and characteristics, has received little attention in the academic literature in Marketing. In this paper, we analyze a duopolistic model in which vertically differentiated firms compete for keywords on the search engine and, subsequently, on price in the product market. When competing for brand keywords in the auction, advertisers have three choices: advertising on their own, on their competitor's, or on both keywords. Advertising on its own brand keyword appears counterintuitive for a firm, because it can also communicate information through organic search results. However, interestingly our results show that firms will bid for the same set of keywords in equilibrium when brand awareness is sufficiently low. The rationale behind this result is that greater competition in the advertising auction will lead to less competition in the product market which is beneficial for firms. In other words, differentiating the bidding strategy hurts firms because it leads to more brand awareness overall and lower profits.

4 - A Strategic Investigation of Generalized Second-price Auctions with Budget Constraint

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Prior literature on generalized second-price auctions has ignored one important aspect of such auctions: the budget constraint of bidders. However, online advertising auctions, the most prominent application of a generalized second-price auction, explicitly acknowledge that advertisers are financially constrained or at least allocate limited resources to online advertising, and thus provide advertisers with an option to set up their daily spending limit. This paper investigates the impact of budget constraints on the bidding strategies in generalized second-price auction. We find that the budget constraint of a higher-ranked bidder may motivate other bidders to bid higher than their own valuation in equilibrium. This is because an aggressive bid may deplete the budget of a higher-ranked competitor or induce a lower-ranked competitor to bid less aggressively. This finding rationalizes the aggressive bidding behavior commonly observed in online advertising auctions. Our analysis also shows that the strongest bidder may not always choose the top position but yield it to the weaker competitor. We extend the model to consider the dynamic bidding decisions and the endogenous budget decisions, as well as the bidding competition of online advertisers in the presence of the product market competition.

■ SC08

Room E304

New Product Adoption II

Contributed Session

Chair: Kanoko Go, PhD Course, Keio University, 2-15-45 Mita, Minato-ku, TO, 1088345, Japan, go.kanoko@gmail.com

1 - Technology Readiness and Technology Acceptance for NFC Mobile Payment Services in Korea

Seungjae Shin, Associate Professor, Mississippi State University, Meridian, 2212 5th Street, Meridian, MS, 39301, United States of America, sshin@meridian.msstate.edu, Wonjun Lee

The NFC mobile payment is integration of NFC enabled smartphones and credit/debit/prepaid cards. Korea is a pioneer in rolling out the NFC mobile payment technology. Global mobile industries pay attention to whether Korean mobile users accept the new payment service or not. This study investigates the factors for technology acceptance using an integrated model of technology readiness (TR) and technology acceptance model (TAM). Structured equation modeling was used to analyze collected data. The four constructs of technology readiness (innovativeness, optimism, discomfort, and insecurity) have significant impact on the perceived ease of use and the two technological characteristics of mobile payment (responsiveness and smartness) also have significant impacts on the perceived usefulness. However, only the perceived usefulness affects significantly on the intention to use. The result of this study suggests that to be a successful payment service, the NFC mobile payment service has to be much more focused on the usefulness against other alternative payment methods.

2 - Modeling New Product Adoption in B2B Markets

Amalesh Sharma, Doctoral Student, Georgia State University, 35 Broad Street, Atlanta, GA, 30303, United States of America, asharma14@student.gsu.edu, Anita Luo, V Kumar, Hongju Liu

It is strategically important to understand the process according to which customers adopt new products in a B2B context. Most studies of the new product adoption have been conducted on consumer durable goods. However, previous research suggested that insights from consumer behavior cannot be readily applied to industrial behavior, and firms' decisions to adopt an innovation may be affected by their valuation of competitive advantages, perceived risks, and the amount of information available. Therefore, it is critical to build a model that reflects how adopters learn about the benefit of adopting new technology from other customers in B2B context. Learning takes place as more and more customers learn about the new technology, leading to an increasing rate of adoption. However, as the market becomes saturated, the rate decreases. We attempt to examine how a firm adopts a new technology given the adoption signals of its major competitor and non-competitors in the same market, and other business units of the same firm in nearby markets, while controlling for firm- and market-specific characteristics, and spatial effects of nearby markets. Our empirical findings show that firms can understand how their business customers adopt a new technology based on the adoption signals in the markets, the relative importance of the different signals, and the drivers of the signlas such as store and market characteristics. A key learning is that firms can therefore strategically release adoption information of other customers to foster a faster adoption rate in the marketplace.

3 - Small Retailer's New Product Acceptance in Emerging Market: A Grounded Theory Approach

Ateeque Shaikh, Doctoral Student, Institute of Rural Management Anand, IRMA Quarters, IRMA Campus, Anand, 388001, India, ateeq.shaikh@gmail.com

The objective of the study is to propose a model of small retailer's new product acceptance criteria in an emerging market context. Empirical research on retailer's new product acceptance either takes modeling approach or survey design to study retailer's new product acceptance. This research intends to propose a grounded model of small retailer's new product acceptance using a grounded theory approach. Design/methodology/approach – In depth interviews with eight small scale retailers four situated in small market town and four in a metro were conducted. The study uses grounded theory approach to construct a model for the small retailer's new product acceptance in an emerging market. The study systematically collected and analyzed the data to generate a theory grounded in the data. Findings The interview data obtained during the interviewing was used to propose a model of small scale retailer's new product acceptance embedded in the emerging market context of India. The proposed model suggest that apart from the trade support and marketing support, relationship factors and reputation of the manufacturer are taken into consideration when accepting a new product. Practical implications The study suggests that marketers have to maintain healthy relationship with the channel partners especially the retailer who is direct contact with the final consumer. Apart from the product and market related which is the supported by the existing literature, relationship factors plays an important role in facilitating new product acceptance. Originality/value This study proposes small retailers new product acceptance in an emerging market context i.e. India. This study is one of the few study which uses grounded theory approach to construct new product acceptance model.

4 - Empirical Research on the Application of Case-based Decision Theory to the Adoption of New Products

Kanoko Go, PhD Course, Keio University, 2-15-45 Mita, Minato-ku, TO, 1088345, Japan, go.kanoko@gmail.com, Mai Kikumori, Yutaka Hamaoka

In marketing literature, "expected utility theory" (von Neuman 1944), "new demand theory" (Lancaster 1971), and the "multi-attribute attitude model" (Fishbein 1963) have been utilized to describe consumer decision-making. These theories assume that consumers are rational and that they have sufficient knowledge to evaluate the importance of product attributes. However, these assumptions may not hold if a product was new to consumers. Gilboa and Schmeidler (1995, 2001) proposed the "Case-Based Decision Theory" (henceforth CBDT) – a decision rule that indicates the best act based on its past performance in similar circumstances. Although CBDT is enticing, it is not empirically tested. This study applies CBDT to explain the adoption of a new product. We formulated two models: (1) the original CBDT model that assumes that consumers consider all the purchased products and remember them and (2) the maximum similarity CBDT model that assumes that consumers compare only the product that is most similar to the new product. We conducted empirical research on beer categories using questionnaire-based purchase behavior data that was collected at two time points. Objective product similarity was calculated using news release information before the product launch. For both models, the coefficient of S (similarity to a new product*utility) was positive and significant; however, the original CBDT model fits better. Thus, we can conclude that the CBDT model can explain.

■ SC09

Room E301

Customer Relationship Management

Contributed Session

Chair: Konstantin Lange, Frankfurt School of Finance and Management, Sonnemannstrasse 9-11, Frankfurt am Main, 60314, Germany, k.lange@fs.de

1 - The Impact of Gift-giving on Customer Profitability

Yashoda Bhagwat, Doctoral Student, Georgia State University, 35 Broad Street NW, Atlanta, GA, 30303, United States of America, ybhagwat1@student.gsu.edu, V Kumar, Russ Belk

Customer engagement is increasingly of great interest among marketing practitioners. However, the relationship between a customer's level of engagement with the firm and his/her future buying behavior has been largely ignored. We argue that customer gift-giving is a form of customer engagement behavior. Given the significance of the gifting industry- the National Retail Federation reports that Americans were forecasted to spend 17.3 billion dollars on Valentines' Day gifts in 2014, we used an econometric model to examine the impact of gift-giving on customer buying behavior. We address the following research questions with individual level transaction data that spans seven years from a large national retailer: 1. Does gift-giving impact future buying behavior? 2. If so, which customer transactional behaviors and firm actions are the drivers of a customer's future gift-giving behavior? 3. Can firms market to customers based on their gift-giving behavior? Our findings have strong managerial implications in terms of whether and how a firm should encourage gift-giving. By understanding the financial implications of customers' gift-giving for the firm and which customers are most likely to engage in gift-giving, a firm can better profile its customers to efficiently target customers with appropriate marketing strategies to improve its overall profit.

2 - The Effects of Promotion Characteristics on Customer Purchase Behavior and Lifetime Duration

Chang Hee Park, Assistant Professor of Marketing, Binghamton University, P. O. Box 6000, Binghamton, NY, 13902-6000, United States of America, cpark@binghamton.edu, Young-Hoon Park, David Schweidel

This research investigates the effects of two types of promotional offers, price-discount and free-sample coupons, on customer behavior in a direct marketing context. In particular, we examine the impacts of different types of coupons on purchase incidence, purchase amount, and customer attrition in a noncontractual setting. Because customer attrition is latent and needs to be inferred from customer transactions, we employ the "buy 'til you die" modeling framework and also include the firm's couponing decisions. Using the data of customer transactions and direct marketing from a company in Asia,we find that a price-discount coupon increases the likelihood of customer purchase and purchase amount during the redemption period of coupons. In contrast, while a free-sample coupon does not affect the likelihood of customer purchase or transaction amount, we find that it reduces the likelihood of customer attrition, suggesting that it helps the firm retain the customer longer. We demonstrate how different types of promotional coupons can be used to manage customer lifetime value.

3 - Consumer Online Information Sharing: A Study of Antecedents and Consequences

Kyungwon Lee, PhD student, Rutgers Business School, 1 Washington Park, Newark, NJ, 07102, United States of America, lkw0402@gmail.com, Avinandan Mukherjee

One of the five paradigms that change our understanding of extended self in the digital age is sharing. People develop an extended image of self by collaborating and sharing information with others. In the emerging "personal information economy" (Kennedy, 2011), consumers are sharing personal information online and on social media at an alarming rate. The purpose of this paper is to propose a comprehensive understanding of antecedents and consequences of consumer online information sharing. Raban and Rafaeli (2007) define information sharing online as communication that offers information about oneself and provides helpful response to a request for information in an electronic medium such as email, instant messaging system, or forum. Self-disclosure is defined. Voluntary disclosure and sharing of personal information (demographic, psychographic, geographic, behavioral) could be pictures, data, email, address, consumption, favorites, etc. Drawing upon the Technology Readiness Index (TRI), we propose a conceptual model that delineates trust and relevance as antecedents to customer online information sharing, moderated by the user perceptions toward technology such as optimism, innovativeness, discomfort and insecurity. Based on the commitment-trust theory (CTT), online trust is shaped by opportunistic behavior, shared values, privacy and security. The consequences of online information disclosure are proposed to be the four levels of CRM bonds – financial, social, customization and structural bonds. For online businesses, the willingness of consumers to share personal information represents rich opportunities to reach and connect with them and offer value added personalized products and services in new and exciting ways. Companies can encourage consumers to share information by enticing them with relationship benefits and CRM bonds. Developing online marketing strategies which seek to minimize privacy and security concerns and promote trust and relevance will help to build long-term customer relationships.

4 - The Impact of Advisor-customer Relationship Dissolution on Customer Retention in Retail Banking

Konstantin Lange, Frankfurt School of Finance and Management, Sonnemannstrasse 9-11, Frankfurt am Main, 60314, Germany, k.lange@fs.de, Dominik Georgi

Customer loyalty to financial service firms has been attributed to many different factors. Most studies find customer satisfaction to be the most important driver of customer retention. Other factors include customer relocation and demographic factors. One of the reasons for customer satisfaction is the relationship quality between customer and bank. Loyalty in relationships can be divided in salesperson owned and firm owned loyalty. Our study's contribution is to combine these findings into a retention model where an important predictor of customers leaving is the dissolution of the advisor-customer (banker/salesperson) relationship. (We measure this dissolution as the change of the banker that is assigned to the client.) We use the CRM data of a large European bank to track more than 1.6 million clients over the course of one year. Using the Cox proportional hazard model we analyze the influence factors on retention for this sample. We find that after a lag of one month there is a strong and positive relationship with customers leaving (i.e. loss of customer) that reaches its peak of over 50% higher dropout rates three months after relationship dissolution, exceeding any other negative influence factor in the analysis. This effect then dissipates and has no influence on leaving six months after the secession. We investigate the change in customer retention expectations after the change of advisor while controlling for multiple relationship factors such as quality, length, width, and depth, as well as clients' demographics, and other characteristics. We find that these results are robust in different specifications. Finally, we draw implications for research and practice.

■ SC10

Room E331

Marketing Performance Metrics and Organization

Contributed Session

Chair: Xiaoning Liang, Dublin City University, Glasnevin Avenue, Dublin, 9, Ireland, xiaoning.liang2@mail.dcu.ie

1 - Organizing for Sales Promotions

Marian Paul, University of Hamburg, Welckerstr. 8, Hamburg, 20354, Germany, marian.paul@uni-hamburg.de, Karen Gedenk, Stefanie Rudek, Franziska Voelckner

When consumer goods manufacturers organize their sales promotion activities they need to decide how to allocate tasks across different departments like product management, key account management and trade marketing. In addition, they need to implement organizational measures to coordinate their sales promotion activities across these departments, e.g., cross-functional teams, job rotation and a corporate culture that emphasizes cooperation. We offer the first study on organization for sales promotion activities. Based on a telephone survey of 97 consumer goods manufacturers in Germany, we study the following questions: (1) What kind of specialization and coordination do firms use for their sales promotion activities? (2) How effective are the different ways of specialization and coordination? (3) Is the use and effectiveness of organizational measures moderated by the type of promotion (price promotions, non-price promotions, tailor-made promotions)? We find, for example, that the influence of different departments on promotion decisions differs across types of promotion. Also, for promotion success is not crucial which department has the largest influence, but rather that influence is concentrated and one department is clearly in charge.

2 - Are Customer's Accurate in their Assessment of the Value Created through Supplier Relationships?

Muhammad Abrahim Zaka, Lecturer, AVANS, Hogeschoollaan 1 Breda, Breda, Netherlands, a.zakakhan@nyenrode.nl, Henry Robben, Kees van Montfort

In recent years a key focus of suppliers has been to create superior value for their customers. However, what is not clear is whether customers are accurately able to assess the value created by their suppliers. Indeed, does investment in relation specific assets pay off for the supplier? In order to address this question I investigate whether buyers are able to accurately assess the value created by suppliers. I collected data from purchasing managers working for publically listed firms in the US through a survey and analyzed the data by means of structural equation modeling. I found that customer perceptions about supplier value creation causing increased customer profitability are not supported. The main theoretical contribution of this study is that it questions the extant belief that superior value creation will be automatically recognized by the customer firm and backed by accounting numbers. Although, some value creation might be recognized by some purchasing managers in order for the results to be acceptable to the buying firm as a whole concrete empirical evidence is required. The implications for the supplier firm is that they should invest more in developing the right kind of metrics to measure the relationships value creation.

3 - Developing a Comprehensive Marketing Performance Measurement System- A Dynamic Capabilities View

Xiaoning Liang, Dublin City University, Glasnevin Avenue, Dublin, 9, Ireland, xiaoning.liang2@mail.dcu.ie, Yuhui Gao

Firms invest significant amounts of money in marketing, while at the same time they constantly face the challenge of justifying the contributions of marketing to the bottom line (Clark, 2008; Goldsmith, 2009). The paradox is largely due to the widening gap between the complexity of marketing and a firm's marketing capabilities (e.g., vigilant market learning) to cope with this complexity (Deloitte, 2010; Day, 2011). Recent research indicates the necessity to develop a comprehensive marketing performance measurement system (MPMS) to close this gap. Certain contingent circumstances such as marketing complexity and business environment are found to influence the development and effectiveness of MPMS (Homburg et al., 2012; Frosen et al., 2013). However, less is known about marketing capabilities and their impact on a comprehensive MPMS. From a dynamic capability perspective, these capabilities enable firms to acquire and deploy resources in ways that match the environment and explain performance variance (Teece et al., 1997; Morgan, 2012).

■ SC11

Room E334

Marketing Strategy

Contributed Session

Chair: James Mason, PhD Candidate, Stevens Institute Technology, Hoboken, NJ, United States of America, james@soularwind.net

1 - Does Victory Belong to the Swift? The Beachhead Effect and Successful Regional Expansion

Joseph Johnson, Associate Professor, University of Miami, 5250 University Drive, Coral Gables, FL, 33146, United States of America, jjohnson@miami.edu, Deb Mitra

Multinational firms entering regional country blocs such as S. E. Asia, Middle East, Latin America, and Eastern Europe often choose a beachhead country as a launchpad for further regional expansion. How do firms choose the beachhead? Do they select a country similar to their home markets to exploit their existing knowledge or do they select a country similar to other potential markets in the region to explore new and pertinent knowledge? How does the beachhead choice affect the speed and performance of subsequent expansion in the region? We address these questions in this paper using a uniquely compiled dataset of firms that entered various Latin American countries between 1990 and 2003. We find that firms differ in their emphasis between exploitation of existing knowledge vs. exploration of pertinent knowledge when they choose a beachhead country. In particular, when firms exploit current knowledge in choosing the beachhead, their initial speed of regional expansion increases while the subsequent speed suffers. When firms explore pertinent knowledge in choosing a beachhead their initial speed suffers but subsequent speed improves. Interestingly, when the firm's entry speed does not fit the above mentioned pattern, their degree of success is significantly lower than otherwise. The results imply that firms' beachhead choice is a critical determinant of their regional speed and performance.

2 - Antecedents and Consequences of Gap between Perceived and Objective Brand Quality

M. Berk Talay, University of Massachusetts. Lowell, One University Ave, Lowell, MA, United States of America, berk_talay@uml.edu, M. Billur Akdeniz

The critical role of quality in driving market performance and firm profitability has been well established. However, while the marketing literature is replete with studies on the "perceived" quality, the role of "actual" quality as a driver of perceived quality has been largely ignored despite the fact that the actual quality of a product or brand is a significant driver of its perceived quality. This study sheds light on this complex and dynamic link between actual and perceived quality. Specifically, we examine a) the long-term brand performance implications of the quality perception gap, and b) how the marketing strategy of a firm affects the gap over time. Our analyses, based on a dataset of the brands in the U.S. automotive market, reveal that a negative gap between actual and perceived quality can improve performance in the short term, but is detrimental to both the perceived quality and sales in the long-run.

3 - Is There a Return on Relational Service Quality For Goods?

Chen Zhou, Assistant Professor of Marketing, Erasmus School of Economics, Burg. Oudlaan 50, Rotterdam, 3062PA, Netherlands, c.zhou@ese.eur.nl, Rafael Becerril Arreola, Raji Srinivasan, Gina Pingitore

It is reasonable to expect that sales respond to improved relational service quality in the pure services or hybrid goods context, because it is either the core product offering or is an important dimension of the product respectively. However, it is not clear whether relational service quality has any impact on sales for industries where the core product is the good (e.g., automobiles, personal computers). In this research, we propose a contingent model and hypotheses relating relational service quality of goods, in conjunction with product and consumer characteristic to product sales. We test the hypotheses using data across multiple years from multiple secondary data sources of 232 car models in the U.S. market between 2009 and 2012. The results of the model estimation indicate that relational service relational service quality for goods has a contingent positive impact on sales foe some product (prestigious products and user network size) and consumer (who value the instrumental value and low expertise) characteristics. Additional insights from marginal effects analysis which quantify the magnitude of the effects of relational service quality generate managerial implications on investments in services for firms selling goods. By identifying the returns to service quality in the goods context, the insights also extend the marketing literature on returns to service quality which has overlooked the goods context.

4 - Marketing Innovative Solution Systems to High-level Stakeholders in the Social Domain: Marketing Retirement Migration to the Developing World as a Development Tool

James Mason, PhD Candidate, Stevens Institute Technology, Hoboken, NJ, United States of America, james@soularwind.net

There is growing concern among social entrepreneurs regarding their ability to scale & validate the impact of their efforts. Innovative business models implemented by inter-organization alliances, are the hallmarks of the solutions and structures increasingly advocated in the social enterprise literature. But as the scale of these solution-approaches increase, so does the level and heterogeneity of stakeholder that must “buy-in” in order to achieve that scale. Regional governors, cabinet ministers, central bankers, and infrastructure specialist are among the gatekeepers that typically make decisions regard social policy. In the realm of social entrepreneurship, solutions take the form of products and services — and the organizations that deliver them — as opposed to policy. How can we market these social enterprise structures and services to customers that are accustom to operating in the policy environment? This research addresses this question. Drawing upon marketing-engineering, social-entrepreneurship, value-network analysis and scenario planning theory: we elaborate the architecture of an enterprise system as a platform for participative narrative inquiry and decision making. Our unit of assessment is the enterprise system’s architecture and value network analysis as a solution-space versus the requirements of a multi-stakeholder conjoint-analysis. Validation is provided via integrated multi-method simulation models (system-dynamics, agent based and discreet event) grounded in empirical and delphi-session data. This overall structure is presented as a platform for sensemaking among high-level stakeholders. We elaborate the OECD’s underfunded population aging liabilities and southern hemisphere economic development as a case.

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Saturday, 1:00pm – 2:30pm

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